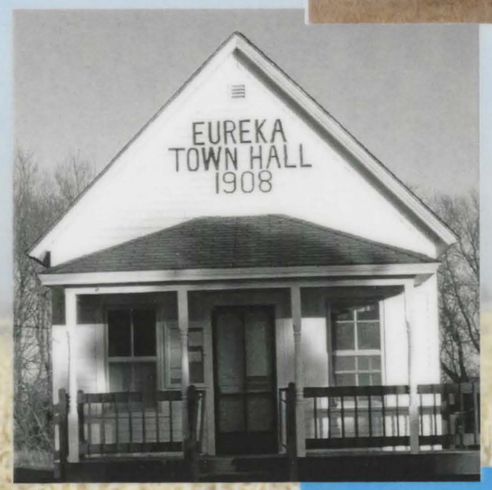
Eureka Township Envisioning Task Force Report:

Exploring the Possibilities



Created by

1000 Friends of Minnesota and Eureka Township Envisioning Task Force

August 2003

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Exploring the Possibilities

Prepared for Eureka Township

August 2003

Envisioning Task Force / 1000 Friends of Minnesota

Credits and Acknowledgments

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1000 Friends of Minnesota

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Dakota County
Eureka Township Board of Supervisors
Franconia Township Board of Supervisors
Citizens of Eureka Township
Citizens of Franconia Township

Table of Contents

I. Introduction/Background: Project Overview

Overview—The purpose of this report is to present ***hypothetical*** future growth scenarios for Eureka Township based on the work of the Eureka Envisioning Task Force. The goal of the report is to provide citizens of Eureka with information about potential residential and commercial growth scenarios that might occur, as well as the associated impacts of this growth on such things as water quality, agriculture, wildlife, township infrastructure, and resident quality of life. The primary audience for this report is the citizens of Eureka Township. Terms in **boldface** in the text are defined in Appendix B at the end of this report.

A Presentation of Possibilities—Throughout this report, several hypothetical land use alternatives are presented and discussed. These land use alternatives, called **scenarios** (see page 8), represent what Eureka Township might look like in the future if certain changes to the current land use zoning are implemented. **Zoning** is the primary means by which development is approved and carried out in the Township. Zoning is the mechanism for guiding how much, what type of, and where new development occurs in the Township. These decisions are critical because new development affects every aspect of citizens' lives, from how much tax revenue needs to be generated to maintain roads and services to the overall physical character and social makeup of the township.

Future-Oriented—One primary purpose of this report is to help citizens of Eureka begin to think about the future of their Township. The physical location of Eureka Township within the **Twin Cities metropolitan area**—directly south of Lakeville and Farmington and adjacent to Interstate 35—assures that Eureka will experience tremendous growth pressure in the future. If citizens and decision makers wait too long and react to this pressure on a case-by-case or development-by-development basis, the result will most likely be unplanned and inefficient growth dominated by the short-term needs of individual developers. However, if the Township takes seriously the information presented in this document and uses it as a starting-point for creating a township-wide, citizen-based vision for Eureka, the Township can enjoy the benefits of growth **and** ensure that future development respects the existing **rural character** and natural resources in Eureka. In short, by anticipating and planning for future development pressure, Eureka Township can strike a balance between growth and protection of those community attributes and characteristics that make Eureka a great place to live.

Foster Informed Debate—The Eureka Township Board of Supervisors is legally responsible for ensuring that development in the Township occurs in a manner that protects the health, safety, and general welfare of all residents of Eureka. This report is intended to provide Township officials with useful information that can help them to make informed decisions about future development that take into account the long-term impact of these decisions. More importantly, this report is meant to encourage more citizens to engage in discussions about the appropriate type, rate, and density of development in Eureka by providing them with the basic knowledge and information necessary to participate effectively in such discussions.

Format—This report is highly visual in nature and is an attempt to allow citizens of the Township to "see" how certain choices regarding land use and physical development could impact the **quality of life** in Eureka. These impacts may include, among other things, higher taxes, more roads, additional school children, additional residents, lower water quality, reduced wildlife habitat, and dwindling farmland. By focusing on visual elements of Eureka Township, this report is intended to help citizens to not only visualize what the future might look like, but also gain a better understanding of and appreciation for the current quality of life in Eureka. Words that appear in **boldface** in the text are defined in Appendix B: Glossary of Terms at the end of this volume.

Funding—This report was made possible by grants provided to 1000 Friends of Minnesota and Dakota County by the Minnesota Office of Environmental Assistance, the Orton Foundation, and Concern Inc. The Eureka Township Envisioning Task Force is indebted to 1000 Friends of Minnesota, Dakota County, and these granting organizations and agencies for making possible this report.

I. Introduction/Background: Eureka Envisioning Task Force

Overview—The Eureka Township Envisioning Task Force was established by the Eureka Board of Supervisors in May 2001. As part of its initial charge to the group, the Board of Supervisors directed the task force to work with Dakota County and 1000 Friends of Minnesota to formulate and discuss various growth **scenarios** for the township, and then learn about the potential impacts of each growth scenario on such things as water quality, agriculture, wildlife, township **infrastructure,** and resident **quality of life**.

Mission and Purpose—Based on its charge from the town board, the task force unanimously adopted the following mission statement:

> The mission of the Eureka Envisioning Task Force is to envision, research, and report to Eureka Township on possible future growth alternatives that may address various long-term goals and interests of the community.

This mission statement indicates that the task force has both a research and an educational purpose, and suggests three specific tasks to be accomplished:

- identify and explore growth issues the township will face during the next several decades
- show the range of growth options available and demonstrate that our community has choices about its future
- provide information about the impact of various growth scenarios so informed decisions can be made in the public interest

It is important to note that ***the Envisioning Task Force is a discussion and educational group, not a policy making group; it has no power to make planning decisions for the township.*** Additionally, the work of the task force has no direct relationship to past or present work on the townshipís **ordinances** or **comprehensive plan.**

The work of the Eureka Township Envisioning Task Force was made possible through generous grants from the Minnesota Office of Environmental Assistance (OEA), the Orton Foundation, Concern Inc., the Laura Jane Musser Fund, and the Carolyn Foundation. The OEA grant in the amount of $52,000 (with a 1:1 match) has supported staff members from 1000 Friends and Dakota County to work with citizens from Eureka and another Minnesota township (Franconia) on scenario and indicator development and analysis, and to create an envisioning handbook for the state. The Orton Foundation grant provided access to and training in the use of CommunityViz™ —a powerful **community visioning** software program that has formed the basis of the work of the Envisioning Task Force. Matching dollars to the OEA grant were provided by the Carolyn Foundation, Concern Inc., and the Laura Jane Musser Fund. To date, Eureka Township has spent approximately $300 for its participation in the study.

Membership—The task force is composed of nine citizen volunteers of various ages, backgrounds, occupations, lengths of residence, and locations of residence in Eureka Township. All nine members responded to a public notice in the official township newspapers and submitted formal letters of application to the Eureka Board of Supervisors. Every citizen who applied to the task force was appointed. The nine members are Jody Arman-Jones, Mike Greco (chair), Ray Kaufenberg, Amy Nielsen, Bob Papke, Patricia Steege, Jerry Swedin, Beverly Topp, and Randy Wood.

Although each member's views on growth and development differ, all members share a concern about Eureka's future, as well as a strong belief that its citizens can actively direct and shape that future if we come together as a community and create a common vision for the township.

The Eureka Township Envisioning Task Force

Standing (from left to right): Ray Kaufenberg, Beverly Topp, Randy Wood, Amy Nielsen, Bob Papke, Jody Arman-Jones, and Pat Steege. Seated: Mike Greco, Gina Mitteco (1000 Friends), and Matt Mega (1000 Friends). Not pictured: Jerry Swedin.

I. Introduction/Background: Project Methodology

Task Force Timeline—The task force has met approximately once every three weeks since July 2001. Task force members spent the first several months becoming acquainted with each other's background and concerns, identifying issues relevant to the envisioning process, and creating a mission statement to guide the group's work. In August 2001, members met for the first time with Matt Mega of 1000 Friends of Minnesota, who has served as the project lead, and Gina Mitteco of 1000 Friends of Minnesota, who has assisted with the project. The work of the task force since that time can be divided into three overlapping phases.

Phase One: Orton Foundation Study (August 2001 to January 2002)—During this period, task force members worked with Matt Mega, director of planning at 1000 Friends of Minnesota, to gather data from Dakota County and participate in a trial of the **CommunityViz**™ software program. The program is capable of generating detailed maps and three-dimensional views of growth **scenarios,** enabling citizens to visualize how various development choices might impact the community. This phase of the group's work allowed Mr. Mega to become fully acquainted with the software and its uses and limitations, allowed the group to search for the most recent data available, and helped all members see how the software could contribute to the envisioning process. During this period, task force members began preliminary exploration of possible growth scenarios and **indicators** to focus on during the next phase of the study. Task force members also began taking photographs of many areas of Eureka to document the visual character and physical attributes of the township at this time in history. One of the most important and time-consuming tasks during Phase One was the education of task force members in various aspects of community envisioning, with which most members had no previous experience.

Phase Two: Eureka Township Envisioning Study (February to October 2002)—During this period, the group focused on refining the growth scenarios and indicators to use for the Eureka Envisioning Study, gathering additional data, and determining how best to present information to the public. Task force members produced five hypothetical growth scenarios for the township and measured the impact of each growth scenario on various community attributes, including water quality, farmland, roads, population, and demand for schools.

Phase Three: Citizen Education and Involvement (November 2002 to present)—During this period, the group continued to refine growth scenarios, indicators, and data and prepared to present to the public their work-in-progress and this report. In November 2002, the task force held a public open house to share results of their work to date, provide information to the public about issues involved in community envisioning, and offer an opportunity for input and feedback from residents. The open house was intended to be a preliminary presentation of the group's work, not a final product. Approximately 70 citizens attended the two-hour presentation. Since that time, task force members have attempted to incorporate and respond to citizen comments by including new scenarios, adding additional indicators, and creating **hybrid** and **alternative scenarios**. This phase of the group's work has included the creation of this report, which presents findings to date and offers a list of recommendations and suggested next steps for how to carry forward the work of the task force. The task force hopes to continue its educational mission through additional open houses, and to encourage additional citizen involvement and input into decisions about the future of Eureka Township.

I. Introduction/Background: 1000 Friends of Minnesota

Helping Local Communities Envision Possible Futures and Find Balanced Solutions to Growth through Technology, Citizen Engagement, and Common Sense

History—1000 Friends of Minnesota is a nonprofit membership organization dedicated to addressing the important connections between development patterns in Minnesota and the health of our local communities and the environment. The organization grew out of citizens' concerns about the potential ramifications of Minnesota's unplanned growth patterns. The 1000 Friends organization coalesced in 1993 as a program of the Land Stewardship Project and was subsequently incorporated as an independent organization, receiving its 501(c)3 determination letter in 1998. 1000 Friends is Minnesota's only statewide organization solely dedicated to growth management issues.

Mission—The mission of 1000 Friends is to encourage **sustainable development** patterns that conserve farmland, forests, and natural resources and promote healthy, economically viable, livable communities.

Organizational Goals—Through education, research, coalition building, advocacy, policy development, and community organizing, 1000 Friends promotes sustainable patterns of development that balance growth with environmentally, economically, and socially sound principles. To achieve this goal, 1000 Friends works toward the following objectives:

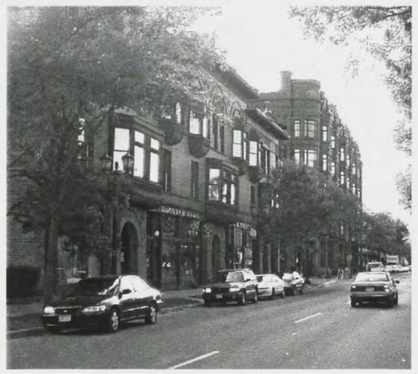
- Compact growth patterns to reduce inefficient growth and excessive costs
- Incentives to direct growth to cities and rural communities with existing infrastructure
- Growth patterns and neighborhood designs that build a sense of community
- Diversity of land use, housing, people, and transportation choices

Eureka Project Overview—1000 Friends believes that citizens who have a better understanding of the link between the choices they make and the potential impacts to the community they love are better prepared to make difficult decisions. To help individuals better understand this link, the Eureka envisioning project combined high-end technology (**Community Viz™**) and citizen involvement to create and analyze potential future development patterns. This technique allowed citizen participants to see what future patterns of development could look like and how these development patterns might impact important resources within Eureka. As a result, citizens and local decision makers will be better able to:

- Find a balance between growth and the preservation of resources
- Proactively address development pressures
- Identify and understand the important links between economic, social, and environmental health

Citizens on a field trip to Dunn, Wisconsin with 1000 Friends

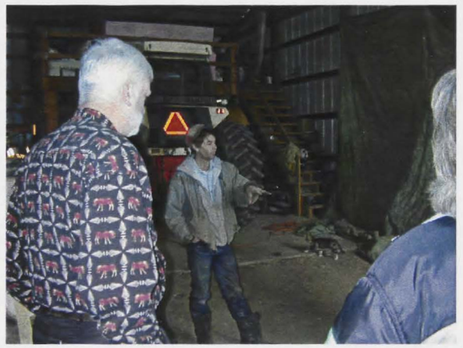
The Eureka Envisioning project helped citizens identify community resources worth preserving, such as farmland



1000 Friends'– offices in St. Paul

1000 Friends staff working with local citizens in Eureka

Matt Mega of 1000 Friends talks to citizens at Envisioning Open House



1000 Friends helps citizens understand the impacts of development choices

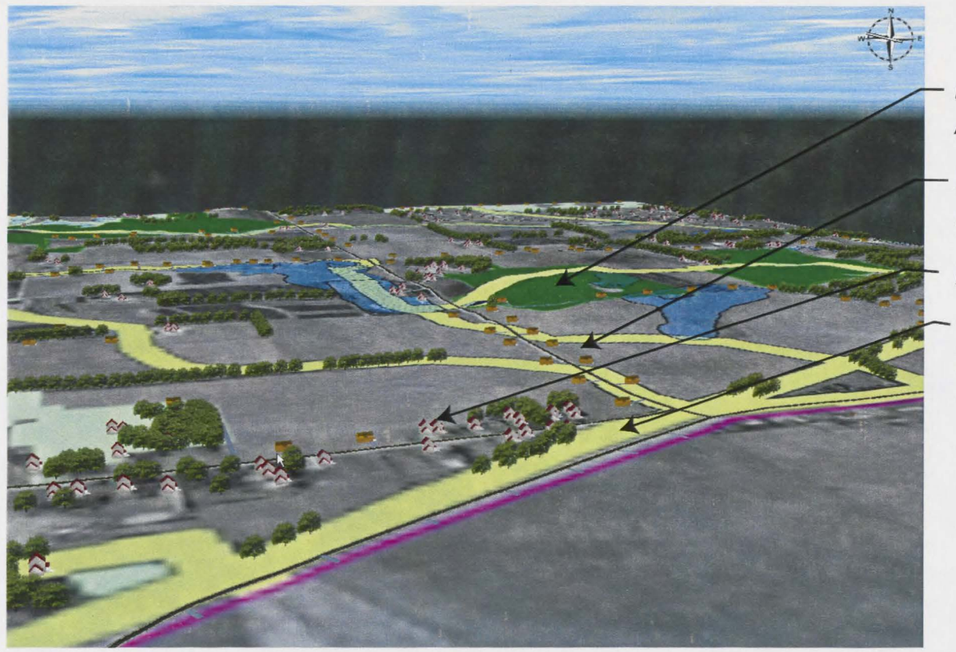
For more information about 1000 Friends of Minnesota, visit their offices at 370 Selby Avenue, Suite 300, St. Paul Minnesota 55102; call 651-312-1000; or visit their Web site at www.1000fom.org.

I. Introduction/Background: CommunityViz™

Do you ever wonder. . .

What your community will look like in the future?	How natural resources data can help inform development decisions?	What proposed development alternatives would look like?

CommunityViz™ is an extension of ArcView **geographic information systems** (GIS) software that analyzes information in new and powerful ways. CommunityViz™ combines three interactive components: Scenario Constructor, Sitebuilder 3D, and Policy Simulator. Scenario Constructor allows users to ask "what if" questions. For example what are the potential impacts to **wetlands** or farmland if a certain type of development is allowed? Sitebuilder 3D allows the user to construct a three-dimensional model of a landscape and fly or drive through the landscape (see figure below). Finally, Policy Simulator allows the user to model where future growth might occur based on local **zoning** parameters.



CommunityViz™ offers local decision makers and citizens the opportunity to quantify and compare potential impacts of different land use **scenarios.** Scenarios can be viewed in 3D or 2D and information can be updated in real time, allowing for an interactive public participation process. The array of activities possible with CommunityViz™ is too broad to fully explore here, but some of the critical components for the Eureka envisioning process have been the folllowing:

- The opportunity to compare and quantify impacts of various development scenarios on groundwater, surface water, farmland, wildlife habitat, and many other social, environmental, and economic indicators
- The ability to see what a proposed development will look like within the actual landscape of Eureka Township, and to take a 3D tour of the development
- The ability to alter a virtual representation of a proposed development to achieve specific goals or outcomes
- The opportunity to engage in informed and collaborative decision making about possible development changes in the community

"Today, projects have to incorporate a wider and more complex array of variables than ever before. And a lot is at stake. Professionals, community leaders, and resource managers are all looking for better ways to see the big picture. They want to play out alternative scenarios and compare near-term and long-term impacts of each one. They want to create visual models of their proposals that everyone can understand. And they want better ways to build understanding and buy-in across a wide range of interested parties."

—Orton Family Foundation

For more information about CommunityViz™ visit the Orton Family Foundation Web site at www.orton.org.

I. Introduction/Background: Scenario Overview

What Is a Scenario?

A **scenario** is a description or model of a hypothetical future development pattern. The Eureka Envisioning Task Force studied several hypothetical growth scenarios that, with certain changes to the Townshipís **zoning ordinances,** could become reality in the future. Some scenarios the task force considered closely mirror current patterns of development in surrounding communities. For example, the 2.5-Acre Rural Estate Scenario (pp. 44–45) is similar to the current development pattern in Credit River Township.

Considerations

It is important to remember that scenarios represent hypothetical development patterns, not actual plans or recommendations for development within the Township. Scenarios do not predict whether or how Eureka will grow, and they are not intended to show what ***will*** happen. Instead, scenarios show what ***could*** happen if certain assumptions become reality. Most importantly, scenarios provide a base of information and a wide range of options for township citizens to discuss and compare. When combined with **indicators** (see page 9), scenarios can effectively help citizens make informed decisions about the future of Eureka Township.

It is not the intention or purpose of the Envisioning Task Force to recommend a single scenario, but rather to present a range of potential scenarios. The goal is to raise awareness and engage citizens in discussions about the future of Eureka Township. Task force members believe that with complete and accurate information, citizens of Eureka will be able to make informed choices about the future of their community. It is equally clear that if a majority of citizens do not actively participate in this process and if the leadership of Eureka Township does not take appropriate action soon to guide future growth, the long-term consequences for Eureka could be disastrous.

What would Eureka Township look like if it developed similar to...

Lakeville

Credit River

Alternative and Hybrid Scenarios

Initially the Envisioning Task Force looked at five core scenarios for growth in the Township. Based on feedback received at the public open house in November 2002, a sixth scenario (a 2.5-acre development pattern) was added. Each core scenario is a hypothetical representation of what Eureka might look like based on various changes to the Township's zoning ordinance. Because each scenario is built on certain basic assumptions about how development would take place, changing or introducing variations to those basic assumptions can result in **alternative** or **hybrid scenarios** of the six core scenarios the task force considered.

For example, because zoning ordinances are only guides to development, each core scenario could play out somewhat differently than shown in this report—just as in the real world, a developer has control over the design and layout of a particular housing development, so long as it meets basic regulatory and zoning requirements. Private landowner decisions, market forces, and local zoning and building regulations will all influence future development patterns in Eureka Township. In addition, two or more core scenarios could be combined to create a hybrid scenario that takes the best of each approach. Finally, development tools such as **transfer of development rights** (TDR; see page 30) could be introduced to a core scenario to create an alternative scenario that differs substantially from the original. In short, the possibilities are limited only by the imagination of the participants, and this provides perhaps the strongest argument for undertaking a community envisioning process that considers a wide range of potential development patterns and their impacts. The Eureka Township Envisioning Task Force has tried to balance the limited time and resources available to it with the desire to investigate as many scenarios as possible by exploring a few hybrid and scenarios where appropriate. These scenarios are presented later in this report.

or maintained Eureka's current development pattern?

I. Introduction/Background: Indicator Overview

What Is an Indicator?

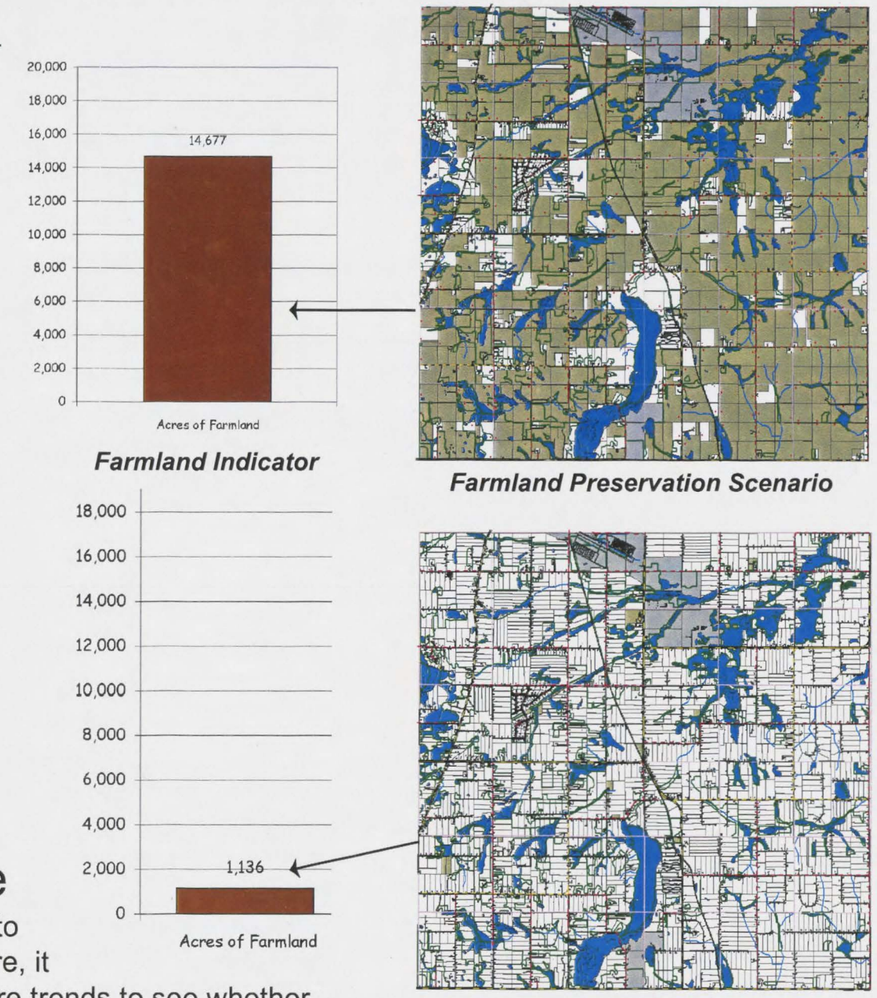
An **indicator** is a feature of the township (e.g., population, miles of roads, demand for services, or amount of farmland) that could be impacted by future development in a way that is statistically predictable and measurable. Indicators allow comparison of various growth **scenarios** based on issues of concern to township residents.

Considerations

The concept of indicators can be obscure and difficult to define. However, indicators are used frequently in real world situations. For example, economists commonly measure consumer spending as an indicator of broader economic trends. Although consumer spending is one small piece of the economic pie, it indicates what direction the economy is headed. Similarly, measuring the amount of farmland in Eureka Township as an indicator for each scenario allows us to look at the ways different development patterns could impact the broader township (see Figure 1). A decrease in the amount of farmland implies a shift in the traditional economy of Eureka, as well as a change in the physical character of the Township.

Indicators are useful tools that allow citizens to compare the impacts of various scenarios, but they cannot possibly address all of the issues that accompany land use change. Some indicators—such as sense of community, **rural character,** or **quality of life**—are subjective and therefore difficult to measure or quantify. Because the number of indicators is limited only by the imagination, there is also the danger of trying to measure or compare too many indicators. It is important to realize that indicators are intended to help people see the broader impacts of land use change and to provide common points of comparison from which citizens can engage in informed discussions about how their community should or should not change.

Figure 1. Hypothetical Farmland Indicator



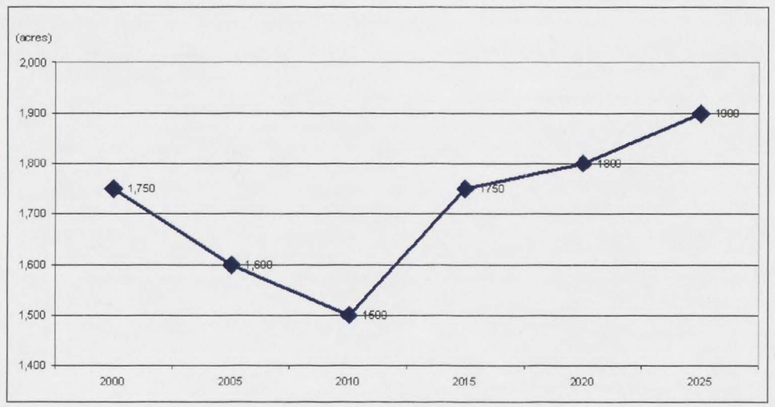


Figure 2. Hypothetical Forest Land Indicator

Tracking Indicators over Time

One of the key features of indicators is the ability to track change or identify trends over time. Therefore, it is useful to measure them regularly and to compare trends to see whether community goals are appropriate and whether existing policies are having the intended effect. For example, if a goal of the **comprehensive plan** is to preserve existing forest land for wildlife habitat, it would be important to track changes to forest land. If an inventory of forest land is conducted every five years, residents and policy makers would have a clear picture over time of the state of forest land in the community (Figure 2). Trends would indicate either *no change* in forest habitat (meeting the minimum goals of the comprehensive plan), a *decrease* in forest habitat (suggesting that changes are needed to community ordinances to meet the goals of the comprehensive plan), or an *increase* in forest habitat (indicating the goal is being exceeded and habitat is being restored or created). This information can help inform future decision making.

I. Introduction/Background: Public Open House Overview

Overview

Residents and landowners in Eureka Township were invited to attend an Envisioning Open House on November 14, 2002. The goals of the open house included:

- sharing preliminary results of the task force's work
- showing the range of future growth options available to the township
- teaching citizens about the envisioning process and the complex issues involved in making decisions about community growth
- providing an opportunity for public input, comments, and feedback

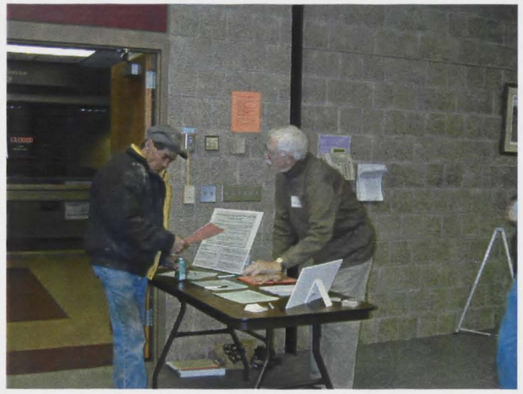
The most critical component of the public open house was providing an opportunity for discussion, debate, and feedback concerning future growth in Eureka. The open house format was specifically chosen to allow feedback in an informal but constructive manner.

Format

The public open house was held at the Dakota County Extension Service building in Farmington. Material was presented at six individual stations located throughout the large meeting room. Two task force members were present at each station to provide an overview of the material at that station and to answer any questions from the public. In addition, most stations had a formal activity that solicited feedback from participants in written form. For instance, at Station Two, citizens were asked to rank the importance of certain community attributes or features, while at Station Five, citizens were given the opportunity to comment on each **scenario** presented.

The format allowed citizens to learn about the complexities of guiding future growth, the potential impacts associated with growth, and how growth and development might affect the physical appearance and character of the township. Material was presented visually through maps and diagrams as well as statistically through charts and graphs. □

In addition to the six stations, a 30-minute presentation by task force chair Mike Greco and project lead Matt Mega provided an overview of the purpose of the task force, a summary of the work completed to date, and a brief introduction to the technical aspects of the project. The purpose of the presentation was to provide citizens with an overview of and some additional background about what they were seeing at each station. After the presentation, citizens were invited to revisit stations and ask more in-depth questions of the task force members. The evening concluded with citizens filling out evaluation forms.



Citizens and guests sign in at Station One and receive information about the evening's events

Information about existing characteristics and attributes of Eureka and surrounding communities is presented at Station Two

Citizens and task force members discuss scenarios at Station Three

Station Four provides an introduction to indicators

I. Introduction/Background: Open House Results

Results

The feedback the Envisioning Task Force received from the public open house was overwhelmingly positive. Many citizens expressed appreciation for the time and effort members of the volunteer task force had put into their work; others offered thoughtful suggestions about how the work of the task force should move forward. Comments received included the following:

"I am glad somebody is thinking about the future before it happens."
"Very well done—visuals were especially helpful (maps and charts) and [the] detail presented. Helps one to realize what a complex issue this is."
"So much good information, very balanced presentation. You all deserve a big THANK YOU!
"We need to look to the future, using info as presented to help us make decisions."

Citizens were also asked what they see as the most important challenges for Eureka Township. Some of the comments received included:

"Preserving natural areas for future generations and maintaining the natural areas we already have."
"Balanced development. Farmers that want to sell and those that want to stay in ag."
"Increase in the number of people, preserving natural areas and farmland."
"The speed of change that is approaching the township."
"Allowing present commercial units to continue to operate. They've been here for some time. We need these services, but also need to locate future growth in a reasonable way."
"Preserving farmland and rural life—do not need shopping malls [and] townhomes."
"To not become another Lakeville."
"Growth pressures from the north and east edges."

As a result of the feedback and comments from citizens, the task force decided to add one additional **scenario** to this report—a 2.5-Acre Rural Estate Scenario, which considers the impacts of a hypothetical **zoning** change allowing residential development on 2.5-acre lots. In addition, the task force also added several **indicators** to better address potential economic impacts, effects of **impervious surface** area, and water quality impacts associated with development.

Maps and indicator results for Eureka scenarios are presented at Station Five

Residents and task force members discuss a hypothetical growth scenario for Eureka at Station Five

Citizens gather around Station Five to view scenario and indicator results.

At Station Six, guests were asked for comments and feedback on the information presented at the Open House

I. Introduction/Background: Summary

This report provides a basis and a beginning for Eureka Township to take a proactive approach to land use development and to ensure that development occurs in a manner that respects the existing character of the community and preserves those unique assets of the Township that make it a special place to live, work, and raise a family. This report tries to demonstrate that Eureka can essentially "have its cake and eat it too" if its citizens and elected officials are simply willing to put forth the effort to define, plan for, and attract the amount and kind of development that residents of the community desire.

Eureka Township is a unique rural community on the edge of a rapidly expanding urban core. Almost every suburban community in the **Twin Cities metropolitan area** was once like Eureka Township. Burnsville, Woodbury, Apple Valley, Richfield, and Bloomington were once farming communities with large tracts of open space and farmland. Through their **comprehensive plans** and **zoning ordinances,** each of these communities chose their particular development path. Each made a conscious decision to allow **suburban-style development,** including strip malls, industrial parks, isolated residential areas, and divided highways. This is not to suggest they should necessarily have chosen differently, but it does point out a very important fact: local communities ***do*** control how, where, and what type of development occurs in their community.

The work undertaken by the Eureka Envisioning Task Force and presented in this report is ***not*** meant to propose an optimal solution or a single growth alternative that Eureka Township should adopt and follow. Likewise, it is ***not*** intended to answer or anticipate every question regarding land use in Eureka Township. Instead this report is designed to help citizens of Eureka understand the complexity of development decisions, to encourage them to visualize and think about the impacts of future development options on the Township before choosing a path to follow, and ultimately to provide a framework for deliberation and discussion about the future of Eureka Township. The citizens of Eureka can and should control what happens to their community. An active citizen base will ensure a strong and vibrant community that reflects the needs and desires of all residents. In many ways, it can be said that this report's primary goal is to help activate that citizen base by beginning such a discussion about the Township's future. The many questions and issues this report raises should ultimately be investigated further by additional citizen task forces, by the Planning Commission, and by qualified planning consultants. Working together, it is possible to create a long-range vision for the future of Eureka that balances the rights, interests, and desires of all Township residents.

Since the Envisioning Open House in November 2002, the Eureka Township Envisioning Task Force has continued to meet regularly to incorporate the input gathered at the open house and to create this report to share with the citizens of the Township. Task force members have also discussed next steps to recommend to the Eureka Township Board of Supervisors, which are included in the final section of this report. These next steps and recommendations are intended to carry this discussion forward by encouraging more citizen participation and input, with the ultimate goal of encouraging the Township to create a collective vision and prepare for the future. The decision to go forward and build upon the work presented in this report ultimately rests with the Board of Supervisors, so ***it is critical that you make your voice heard on the matters presented in this report.*** We encourage citizens to become involved by attending Board of Supervisor and Planning Commission meetings, staying informed about growth and development issues in the region, and taking advantage of opportunities to express your opinion about these issues in our community. One of the many advantages of living in a small town like Eureka is the very real opportunity to influence decision making through participation in township government. Only through a sustained effort by its citizens will Eureka maintain its unique **rural character** and **quality of life**, and ultimately choose a development path that is in the best interest of all residents.

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II. Regional Context: Physical Characteristics of Eureka

Eureka Township is a small rural community of approximately 1,500 residents located in the southwestern corner of Dakota County, Minnesota, roughly 25 miles south of Minneapolis–St. Paul. The area was first settled in 1854 and Eureka was officially organized as a township by the Dakota County Board of Commissioners in 1858.

Although it lies within the **Twin Cities metropolitan area,** Eureka is a largely agricultural community and the Township is currently designated as an **Agricultural Preserve Area** by the **Metropolitan Council.**

Natural resources including the Vermillion River, Chub Lake, and several tributaries and streams provide a network of wetlands and **open spaces** that complement the agricultural landscape and create the scenic vistas and **rural character** of the Township. These open spaces and **natural areas** also help to ensure that Eureka residents can enjoy clean water, clean air, and abundant wildlife.

Eureka Township is a standard 36-square-mile township. The north central and northeastern parts of the Township are flat or very slightly rolling countryside, while the extreme western and southern parts of the Township are characterized by rolling hills with some very steep slopes, particularly near Chub Lake.

Two major watersheds drain Eureka. The Vermillion River Watershed covers the northern half of the township. Southern portions of the Township drain to the north branch of Chub Creek, which flows southwesterly out of the south end of Chub Lake.

Natural Resources—Many unique natural resources can be found in Eureka Township, including the Vermillion River and a newly established State Wildlife Management Area along the shores of Chub Lake. These natural resources help create the unique scenic qualities found only in Eureka.

The Vermillion River winds its way through Eureka Township

Agricultural Lands—Perhaps the most significant distinguishing characteristic of Eureka Township is its many acres of farmland. The Township has the largest percentage of high-quality farmland in all of Dakota County. Two-thirds of the land in Eureka contains prime agricultural soils (Class I or Class II, based on the Agricultural Capability Groups and Crop Equivalency Ratings). Several organic farms and nurseries are located in the Township, demonstrating the diversity of farming enterprises and the importance of small-scale innovative farm operations. It is not uncommon to see natural areas adjacent to and interspersed throughout agricultural areas, illustrating the important role of farmers as stewards of the land.

What makes Eureka special...

unique homes

small-scale businesses

rural roads and low taxes

nontraditional agriculture

open space

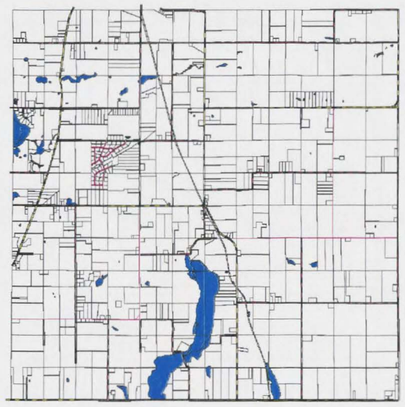
II. Regional Context: Eureka Physical Characteristics

Overview—The physical characteristics of a community determine the opportunities and constraints for future development. Good planning and common sense would suggest that development should be limited in areas that are sensitive to environmental pollution or disruption. This would include floodplains, areas sensitive to groundwater contamination, areas with high-quality wildlife habitat, steep slopes, and all surface waters and **wetlands.**

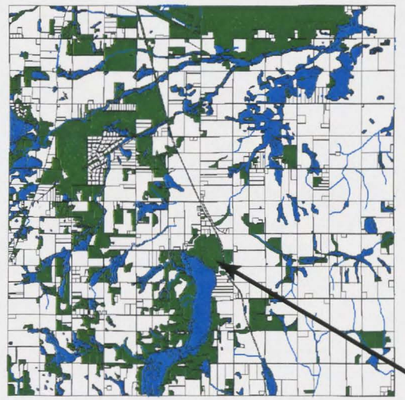
If a community has available this base information about physical characteristics, it is more likely that future growth and development of the community will respect, enhance, or minimize impacts to significant resources and areas identified by the community as important assets.

The overall goal in planning for development should be to use baseline data as a guide to help citizens and decision makers identify those areas that can be developed and those areas that should be protected. Good baseline information also helps generate informed debate and discussion among citizens, helping to identify important values that can be reflected in the **comprehensive plan** and **zoning ordinances.**

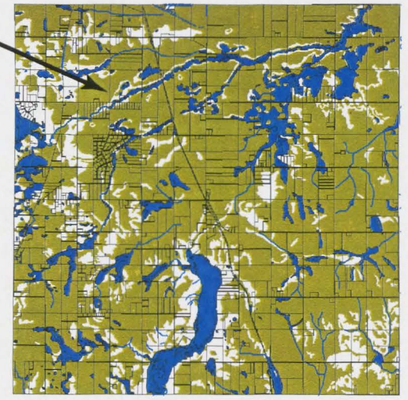
In the Township's existing comprehensive plan, in response to a citizen survey conducted in the early 1990s, and most recently at the citizen open house conducted as part of the current envisioning process, citizens of Eureka Township have consistently expressed a desire to protect farmland and **open space**. There appears to be a strong consensus that these characteristics are important elements of the **quality of life** in Eureka and help to make the Township a unique place to live. If protecting these resources remains a goal of the majority of Eureka citizens, knowing where these areas are located in the Township can help to ensure their long-term survival.



Parcels—Currently there are 843 separate land parcels in Eureka Township. The average-sized parcel is 27 acres. The smallest parcel is one-half acre and the largest parcel is 162 acres.

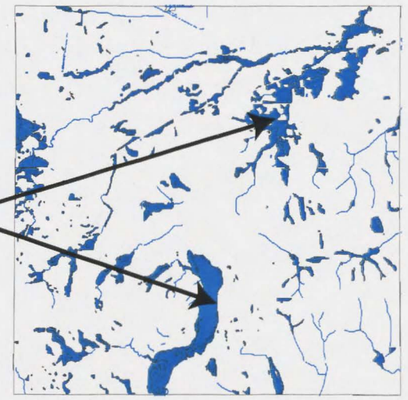


Natural Areas—Dakota County Soil and Water Conservation District (SWCD) has used land-cover data to identify significant natural resources in Eureka.



Farmland—Two-thirds of Eureka Township is classified as having prime agricultural soils

Groundwater—Dakota County Soil and Water Conservation District (SWCD) has identified areas susceptible to groundwater contamination.



Wetlands—Eureka Township has several significant surface water resources including Chub Lake, the Vermillion River, Chub Creek, and many interconnected tributaries and wetlands.

II. Regional Context: Eureka Demographic Characteristics

Overview—According to the 2000 U.S. Census, the current population of Eureka is estimated to be 1,490 people, with 496 households. About 45% of the population is under the age of 35 and the median age of Eureka citizens is 37.6 years. The tables to the right illustrate some key demographic characteristics of Eureka for the years 1990 and 2000. Of particular significance is the 49% increase in Median Household Income from 1990 to 2000, as well as the 95% increase in Median Home Value, from $101,000 to almost $200,000.

Employment—Approximately 8% of the population of Eureka is employed in farming or farming-related industries, down from 19% in 1970. Other major occupations include construction (8%); retail trade (15%); educational, health, and professional services (21%); and manufacturing (23%).

Commuting—Only minor changes in commuting patterns and vehicle ownership occurred in Eureka between 1990 and 2000. The number of residents working at home dropped less than 2%, citizens owning 3 or more vehicles increased less than 2%, and the mean travel time to work increased by approximately 1 minute.

Projected Growth—According to the **Metropolitan Council,** Eureka Township will grow at a fairly slow rate during the next 20 years. These demographic trends reflect the fact that the Metropolitan Council has identified Eureka Township as an **Agricultural Preserve Area.** This designation recommends that Eureka maintain its current **zoning,** which limits residential development to one home per quarter-quarter section.

Metropolitan Council's Projected Growth Rate for Eureka Township

Year	2000	2010	2020
Population	1,490	1,650	1,800
Households	496	630	700

Agricultural Census—The agricultural census is taken every five years and identifies county and state trends in agriculture. According to the 1997 Census of Agriculture, there were 442 full-time farms in Dakota County, a decrease of 7% since 1992. In 1997, there were 221,316 acres farmed and the average farm size was 249 acres. The market value of all agricultural products increased 28% between 1992 and 1997, with 63% of sales attributed to crops and 37% to livestock in 1997.

Household Characteristics	2000	1990
Total Population	1,490	1,405
Total Households	496	447
Average Household Size	3.00	3.14
Owner Occupied Housing Units	455	403
Renter Occupied Housing Units	41	44
Median Home Value	$197,400	$101,100
Median Household Income	$66,875	$44,891
School Enrollment (3+ yrs.)	442	412

Source: 1990 and 2000 U.S. Census

Commuting to Work	2000	1990
Total workers (16+ yrs.)	856	776
Drove Alone	677 (79.1%)	608 (78.4%)
Carpooled	76 (8.9%)	73 (9.4%)
Public Transportation	13 (1.5%)	6 (0.8%)
Walked	8 (0.9%)	5 (0.6%)
Worked at Home	73 (8.5%)	84 (10.8%)
Mean travel time to work (min.)	23.9	23
Vehicles Per Household		
0	4 (0.8%)	0 (0%)
1	59 (11.8%)	62 (13.9%)
2	220 (44.2%)	200 (44.7%)
3 or more	215 (43.2%)	185 (41.3%)

Source: 1990 and 2000 U.S. Census

II. Regional Context: Current Eureka Planning Efforts

Overview—The primary means of planning for future growth and development is the creation and implementation of a **comprehensive plan**. The comprehensive plan is a document that establishes the vision, goals, policies, and strategies to guide a community's growth. It is critical that citizens participate in the comprehensive planning process and that every effort be made to fully engage citizens in this endeavor. Currently, Eureka Township is in the process of updating its comprehensive plan. A draft version of the updated plan is available, and interested citizens are strongly encouraged to contact the Township Clerk to obtain a copy. The completion of this work is anticipated in 2003.

To implement their comprehensive plans, most communities rely on a **zoning ordinance.** This ordinance establishes the physical requirements for subdividing land and officially designates which land uses are permitted and how different land uses are to be distributed throughout the community. However, a zoning ordinance is not the only means of implementing a comprehensive plan and many communities have sought to meet the goals and vision of the comprehensive plan through innovative land use tools and development strategies. Some of these efforts will be discussed later in this report in Section III.

> "The AG District is designated for areas where long-term agricultural preservation is the desired future land use. While commercial agricultural is the overwhelming predominant land use in this district, some scattered non-farm residences do exist. Single family residential development will be allowed to continue, provided that building sites do not interfere with commercial agriculture or cause environmental problems. The maximum density for residential development shall be one residence per quarter-quarter section. Residential lots must be at least two acres in size, and possess 150 feet of frontage on a public road."
>
> ***—Eureka Township Comprehensive Plan Update (draft only)***

Current Eureka Comprehensive Plan—The Metropolitan Land Use Planning Act of 1995 requires that local units of government in the **Twin Cities metropolitan area** complete a review of their comprehensive plans every 10 years to insure that local fiscal devices and local controls are consistent with the comprehensive plan and to respond to changes in the **Metropolitan Council's** regional system plans. The 1995 Act also requires that local plans be updated by December 31, 1998.

The current Eureka Comprehensive Plan identifies the entire Township as an agriculture district with a zoning designation of one home per quarter-quarter section (approximately 40 acres). The proposed language regarding zoning in the updated comprehensive plan appears in the box at the left below.

Other Current Planning Efforts—Eureka Township is a small community with a limited budget. As such, the Township does not have land use planning staff or a zoning administrator. Much of the work of planning for the future falls to the Planning Commission or directly to the Board of Supervisors. To provide avenues for citizen participation and to preserve resources, the Board of Supervisors has established several **citizen task forces**. Citizen task forces play an advisory role, making recommendations to the Board of Supervisors on very specific issues as designated by resolution. Any resident of the township is eligible to serve on a citizen task force, and the creation of new task forces is typically announced through the Township's quarterly newsletter, *Eureka! The News,* or through public notices in the *Lakeville Life and Times* and *Farmington Independent* newspapers.

Currently, Eureka Township has four ongoing citizen task forces. The Town Hall Task Force is charged with studying the feasibility, cost, and design of a new town hall. The Commercial Task Force is exploring the desirability of, hypothetical timeframe for, and possible location of future commercial development within the Township. The Envisioning Task Force is charged with studying future growth scenarios for the Township. Finally, the Nonconforming Land Use Task Force is reviewing a recently passed township ordinance intended to regulate and create legal status for existing nonconforming businesses in Eureka.

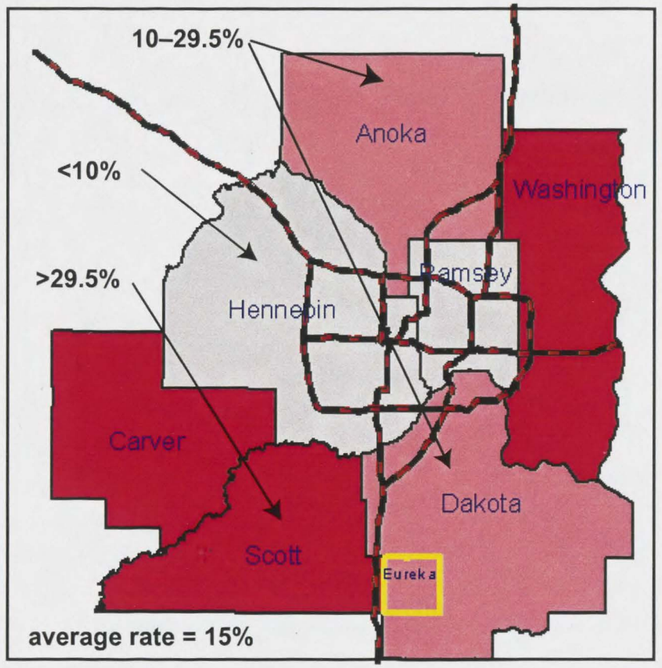
II. Regional Context: The Metropolitan Council

Overview—In the year 2000, the seven-county **Twin Cities metropolitan area** contained 2,642,056 people, 144 cities, and 56 townships. The **greater metropolitan region** (which consists of the seven-county metropolitan area and the nine surrounding **collar counties**) contained 217 cities and 186 townships. The total land area of the greater metropolitan region is 5,301,245 acres, with 1,903,618 acres located within the seven-county area. The **Metropolitan Council** is predicting that growth in the region will slow during the next 30 years. By the year 2030, the Met Council projects that the seven-county metropolitan area will be home to 3,573,000 people. This represents an average growth rate of 10%, which is slightly lower than the average rate of 15% actually experienced during the decade 1990–2000.

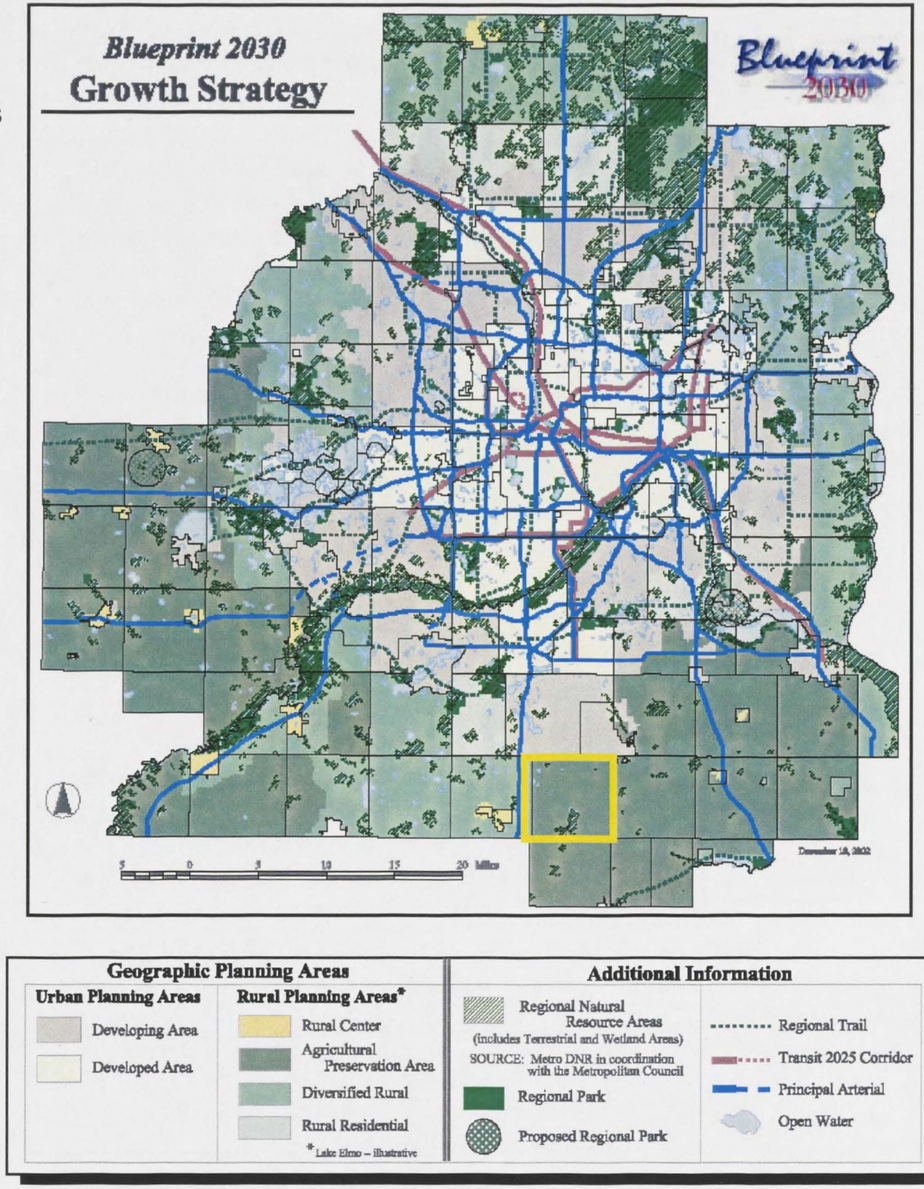
Planning for future growth and development is the responsibility of local communities, with guidance provided by the Metropolitan Council through their *Regional Blueprint.* It is the responsibility of the Metropolitan Council to establish a regional vision for growth that is economically efficient, orderly, and that maintains the critical assets of the region. Although their is some disagreement regarding the exact powers of the Met Council and their ability to mandate local planning, current growth and development are still dominated by local **comprehensive plans** and implementation.

Blueprint 2030—The ***Regional Blueprint 2030*** was adopted by the Metropolitan Council on December 18, 2002. The *Blueprint 2030* provides metro area communities with goals, policies, and guidelines that ensure regional economic vitality, health, and environmental protection.

All of Eureka Township is identified as an **agricultural preservation area** in the *Blueprint.* Met Council recommendations for Eureka are to maintain agricultural areas at a zoning of one home per quarter-quarter section. The *Blueprint 2030* also identifies a few **natural areas** of regional significance in Eureka around Chub Lake and along the Vermillion River.



Seven-County Population Growth Rates, 1990–2000



Regional Blueprint 2030 Growth Strategy

II. Regional Context: Scott County Comprehensive Plan

The Scott County Comprehensive Plan was adopted on May 23, 2001. During the completion of the plan, Scott County imposed a development moratorium on all new development in unincorporated areas under its jurisdiction. The moratorium was enacted on March 28, 2000, and was allowed to sunset upon completion of the comprehensive plan. It is beyond the scope of this report to summarize the entire Scott County Comprehensive Plan. This section will therefore focus on those areas adjacent to Dakota County and Eureka Township. Readers are encouraged to visit the Scott County Web site at http://www.co.scott.mn.us for more information.

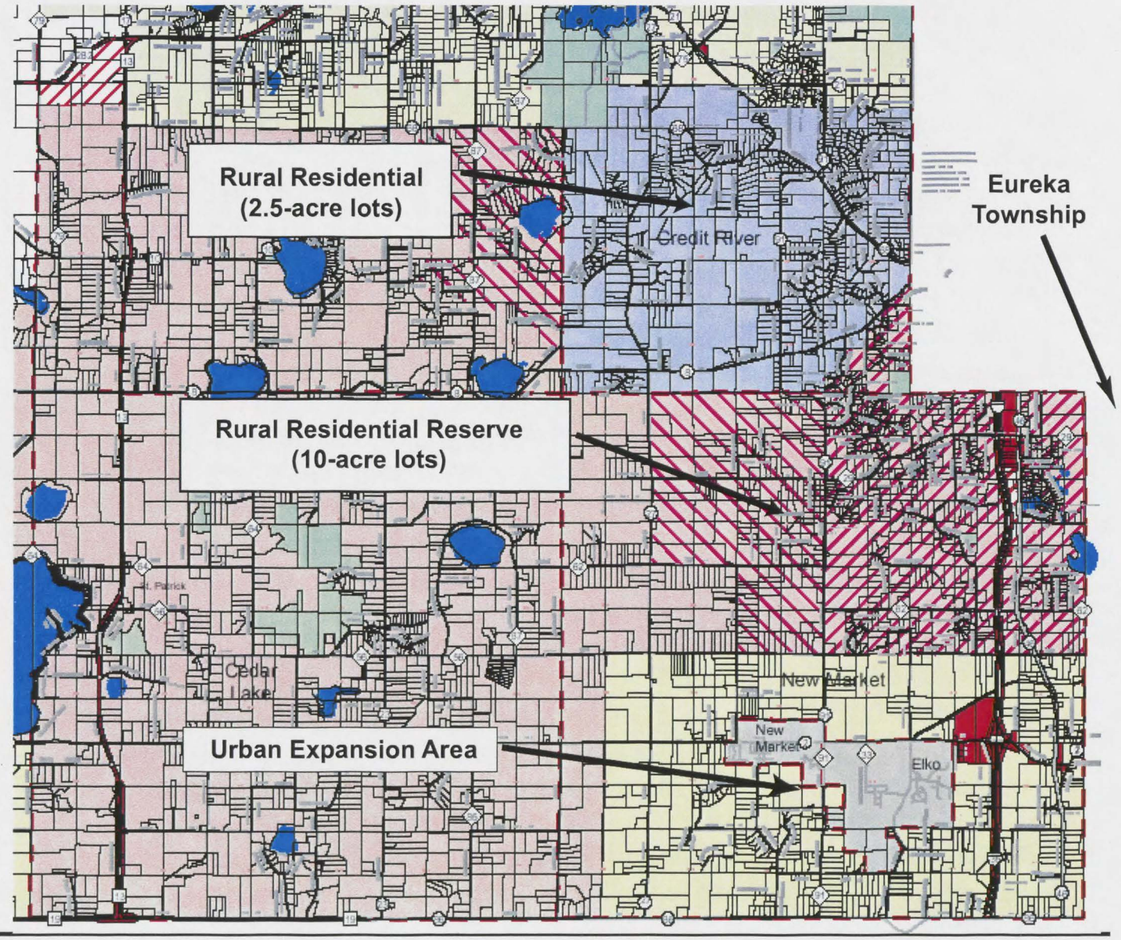
Scott County grew by 55% from 1990 to 2000. This rapid rate of growth distinguished Scott County as one of the fastest growing counties in the nation, a feat unprecedented in the northern region of the United States. This growth is not expected to slow during the next two decades and some of the greatest growth is likely to occur in communities that border Dakota County. To guide this growth, Scott County has provided a land-use strategy that focuses on urban expansion near the cities of Elko and New Market and **rural residential** development in Credit River Township at an overall density of one house per 2.5 acres. Scott County also encourages "community sewer and water and tight **cluster** concept to encourage [a] sense of rural community" in Credit River.

Scott County's approval of 2.5-acre development has spurred considerable debate concerning the environmental, economic, and social impacts of this pattern of growth. Scott County has attempted to address some of these concerns in an Alternative Urban Areawide Review (AUAR) adopted by the Board of Commissioners on May 6, 2003. The AUAR is an environmental review process and therefore does not address the economic or social impacts of the proposed 2.5-acre development. Much attention in the AUAR was focused on groundwater impacts of rural residential development. During the next few years, a clearer picture of these impacts should emerge. Meanwhile, debate is likely to continue.

Scott County Demographics (1990–2000) and Growth Projections (2000–2020)

City/Twp	1990	2000	% change 1990–2000	Met Cncl 2020	Met Cncl % change	Scott Cty 2020	Scott Cty % change
Savage	9,906	21,115	113%	39,000	85%	39,000	85%
New Market/ Elko	476	804	69%	5,150	541%	6,070	655%
New Market Twp	1,972	3,057	55%	5,300	73%	6,161	102%
Credit River Twp	2,854	3,895	36%	6,800	75%	8,974	130%

Eastern Scott County Detail (2001 Comprehensive Plan Designations)



II. Regional Context: Dakota County Comprehensive Plan/Farmland and Natural Areas Project

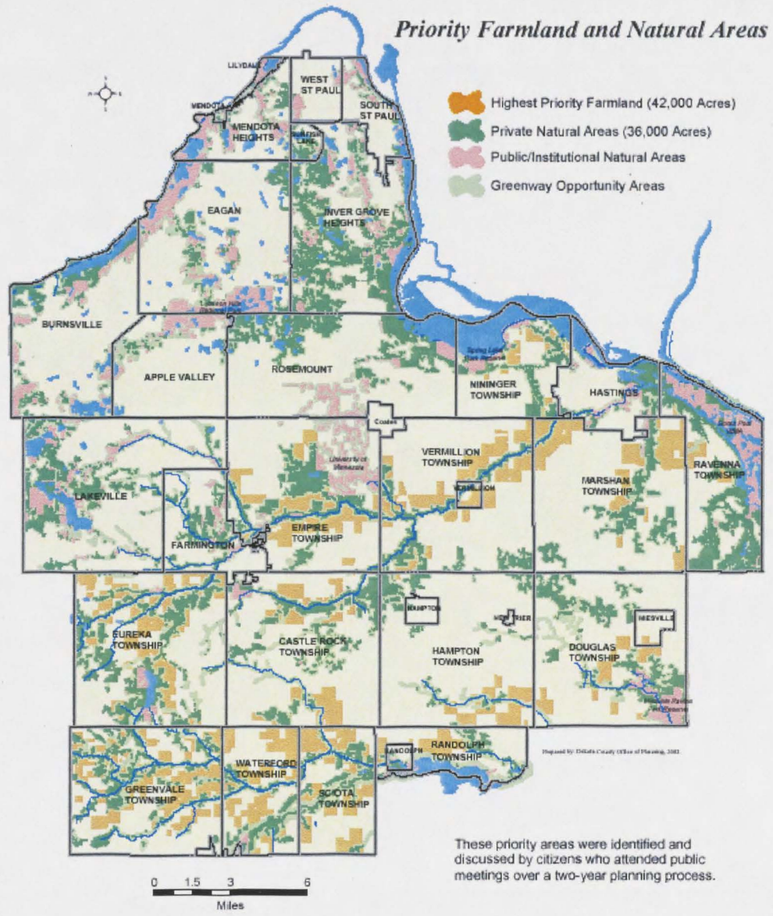
Overview—Dakota County does not have jurisdiction over planning in the County. Instead, each local community is responsible for guiding and regulating development within its own borders. Dakota County does, however, have a **comprehensive plan,** which plays a major role in guiding future development patterns. By building infrastructure, providing services, and engaging in cooperative actions with local communities, Dakota County can and will have a dramatic impact on the future growth and development that occurs in Eureka Township. The Dakota County Comprehensive Plan is based on extensive surveys and feedback from citizens over many years, and provides a common set of goals and strategies based on this feedback. However, the County must work cooperatively with local communities to ensure implementation of the plan because all land use decisions are made at the local level.

Dakota County Farmland and Natural Areas Project—One innovative way Dakota County is engaging in cooperative efforts with local communities is through the **Farmland and Natural Areas Project** (FNAP). The project began in 1999 with extensive public meetings to introduce the concept of farmland and **natural areas** preservation and to seek citizen input. Funding for the initial phase of the project was approved by the Minnesota Legislature based on a recommendation by the Legislative Commission on Minnesota Resources, with additional funding from the state's Environmental Trust Fund.

In response to the 2001 Dakota County Residential Survey, 96% of residents expressed interest in protecting natural areas (69% said it was very important and 27% said it was somewhat important). Another 54% expressed a strong interest in protecting farmland. In response, Dakota County Commissioners adopted a preliminary FNAP planning document in January 2002. The Executive Summary stated that the purpose of FNAP is "to address citizen concern over the loss of farmland and natural areas AND to determine how to protect these areas using incentive-based tools."

In November 2002, Dakota County voters approved a $20 million bonding referendum to protect farmland and natural areas in the County as identified by FNAP. The referendum passed in Eureka Township by a 52% to 48% margin, with 87% of registered voters voting. The referendum passed by a wider 57% to 43% margin countywide. At the time this report was issued, Dakota County was accepting applications from landowners interested in participating in the program.

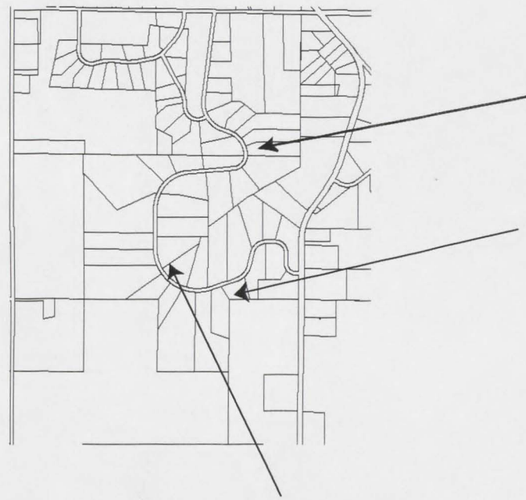
A total of 36,000 acres of priority natural areas and 42,000 acres of priority farmland have been identified countywide as eligible for protection. Participation in the program is entirely voluntary, with funds from the bonding referendum to be used for the purchase of **conservation easements** from willing landowners. Depending on the agreements reached with individual landowners, some of the land in the program would become public and some would remain private **open space** that is permanently protected from development. Depending on land prices and the County's ability to leverage state and federal land protection funds, the funds from the bonding referendum could be used to protect approximately 5,000 to 10,000 acres.



II. Regional Context: Residential Development Patterns

Large-Lot Rural Residential Development—The **Twin Cities Metropolitan Area** does not have a standard definition of **rural residential** development. The **Metropolitan Council** defines rural residential development as a **density** of one home per 10 acres of land. This standard does not necessarily translate into 10-acre lots, however, because the Met Council encourages **cluster development** and smaller lot sizes to ensure protection of natural resources and other community assets. The Met Council also encourages communities to allow 10-acre development in urban reserve areas slated for future urban-density development. However, many communities within the Met Council's jurisdiction have operationalized the guidelines into a 10-acre minimum lot size requirement. Some communities, such as Eureka, have attempted to preserve large contiguous parcels of farmland and natural areas by implementing one house per quarter-quarter section zoning or a similar one house per 40 acre zoning requirement. The photos and figures below illustrate these two types of large-lot rural residential development. The next few pages demonstrate additional residential development patterns common in the Twin Cities metro area using descriptions, photos, and other illustrations.

10-Acre Rural Residential Development (Ravenna Township)

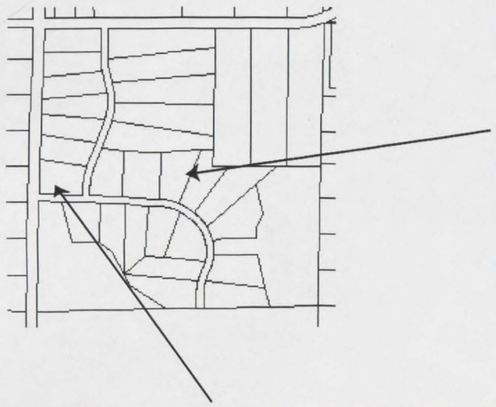


40-Acre Rural Residential Development (Eureka Township)

II. Regional Context: Residential Development Patterns—Continued

Small Lot Rural Residential Development—Some communities have defined **rural residential** development as 2-acre to 5-acre lots. For example, Credit River Township currently has guidelines for rural residential development that maintain a 2.5-acre density. Ravenna Township, in addition to 10-acre development, also has many developments with 3-acre and 5-acre lots. Usually these types of development patterns result in construction of large estate homes. Most communities that allow this type of development encourage, but do not mandate, **community wastewater treatment systems**. As a result, they often experience a proliferation of onsite septic systems, with an attendant risk of groundwater contamination. In recent years, Credit River has begun to experience such problems from onsite septic systems on smaller lots located in high-risk areas. Recently the township decided to develop community septic systems to alleviate such problems. Lake Elmo is one of the few **Twin Cities metropolitan area** communities that makes extensive use of community septic and other innovative treatment systems.

2-Acre to 5-Acre Rural Residential Development (Credit River Township)



II. Regional Context: Residential Development Patterns—Continued

Residential Cluster Development—Many communities throughout the country encourage **cluster development** as an alternative residential development pattern. The primary advantage of residential cluster development is that it allows for significant development in a rural setting while permanently maintaining large areas of **open space.** The open space areas are protected within each development and may or may not allow public access. If public access is not permitted, the open space is still collectively owned, maintained, and managed by the property owners within the development. Another advantage of cluster development is that it often reduces the amount of **infrastructure** that needs to be built and maintained. It is important that communities that seek to implement cluster development establish basic guidelines, such as the minimum percentage of open space necessary in new developments and the type of septic systems required. Communities should also require that a **conservation easement** be placed on the open space areas, as this is the only legal means to ensure permanent protection. A **density bonus** can also be provided as an incentive for developers to undertake cluster development. A density bonus allows the developer to construct additional homes if they agree to follow the guidelines for residential cluster development.

Jackson Meadows
(Marine-on-St. Croix)

Fields of St. Croix
(Lake Elmo)

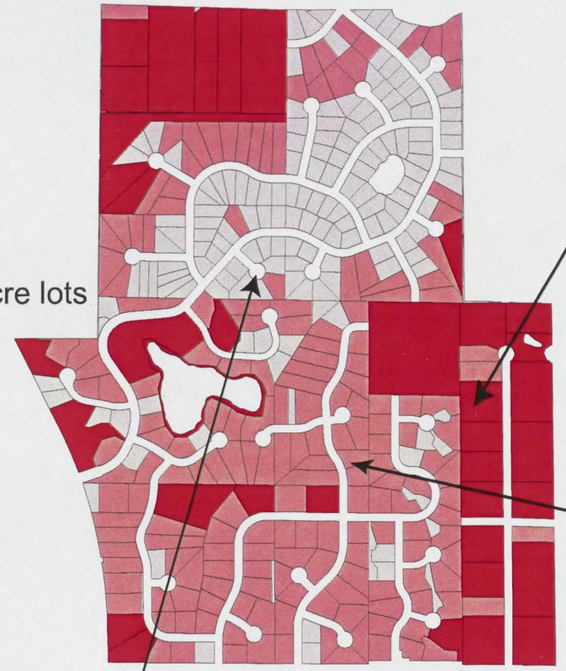
II. Regional Context: Residential Development Patterns—Continued

Suburban Sewered Lots—The **Twin Cities metropolitan area** has a variety of housing options and styles. However, the most prevalent residential development pattern in suburban communities is 1/3-acre lots with urban sewer and water service. Farmington, Lakeville, Burnsville, and Apple Valley all have **zoning** provisions to allow for 1/3-acre suburban development. Within some subdivisions, lot sizes vary from 1/3-acre to 1/2-acre or more. Subdivisions with lots that are 1-acre or greater in size are more often than not considered **rural residential** and have individual onsite septic systems and private wells.

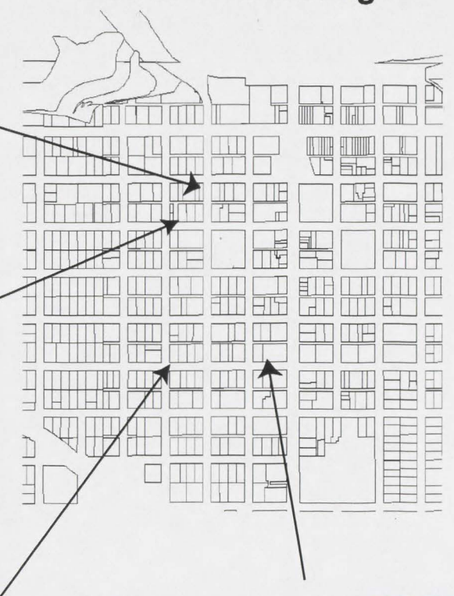
Urban Lots—In older urban areas, residential development patterns and roadways tend to follow a grid pattern. Lot sizes vary, but a typical city lot usually has 40 to 80 feet of frontage and is between 100 and 150 feet deep. These dimensions yield a 5,000- to 8,000-square-foot lot. The City of Hastings follows this pattern, with some variation in lot size due to redevelopment efforts and individuals purchasing double lots for one single-family home.

Lakeville

< 1/2-acre lots
1/2-acre to 1-acre lots
> 1-acre lots



Downtown Hastings



II. Regional Context: Commercial Development Patterns

Commercial Development Patterns—Although commercial and retail development patterns vary greatly throughout the **Twin Cities metropolitan area,** the dominant pattern is big-box retail, office parks, and strip development. These types of commercial development provide easy and familiar models in today's fast-paced development environment, and many investors are reluctant to risk change. However, some communities continue to successfully maintain small-scale neighborhood commercial and traditional downtown commercial settings. Pages 25 and 26 provide a visual overview of the different patterns of commercial and retail development in the Twin Cities area.

Farmington

Apple Valley

Apple Valley

Apple Valley

Farmington

Lakeville

II. Regional Context: Commercial Development Patterns—Continued

Commercial Development Patterns—As **smart growth** concepts, N**ew Urbanism,** and other innovative planning and development approaches become more prevalent, opportunities for unique commercial settings and **mixed-use** residential/commercial developments increase. This page highlights traditional downtown or "main street" commercial development patterns, as well as contemporary efforts to create mixed-use **town centers** or downtown areas. All of these patterns provide an alternative to the single-use, large-scale commercial development styles depicted on the previous page.

Farmington

Golden Valley

Lakeville

St. Paul

Golden Valley

Farmington

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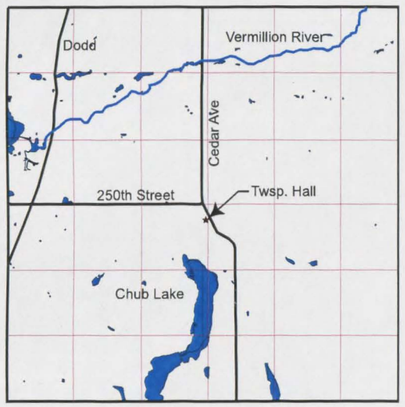
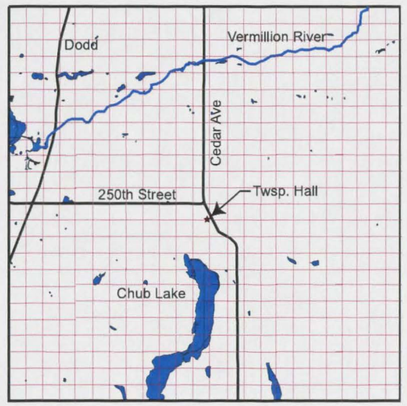
III. Scenarios: Introduction

Overview—This section will discuss and illustrate the six core growth **scenarios** explored by the Eureka Envisioning Task Force, as well as several **hybrid** and **alternative scenarios** that were added in response to feedback received at the Envisioning Open House in November 2002. The task force created an initial list of potential scenarios to consider based on discussions at several meetings. To narrow the list, task force members ultimately voted on which scenarios they were most interested in examining during the course of this study.

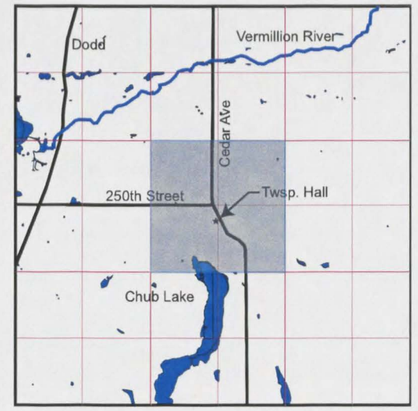
This page provides a brief introduction to each of the six core scenarios. In the pages that follow, readers will be introduced to the concepts of **transfer of development rights** and **purchase of development rights**, which are important elements of several of the hybrid and alternative scenarios included in this report. Readers will also be presented with a snapshot of existing conditions within Eureka as a baseline for comparison with other scenarios. The remainder of the section will present three-dimensional visualizations and hypothetical development patterns for each scenario, along with a description of the scenario's major features and the task force's rationale for including the scenario in this study.



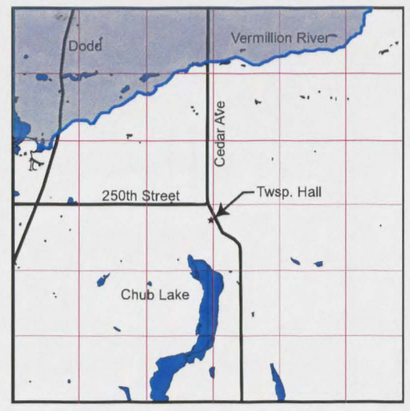
Current Zoning Buildout Scenario: Shows what Eureka would look like if it were to continue to develop at its current quarter-quarter zoning density.



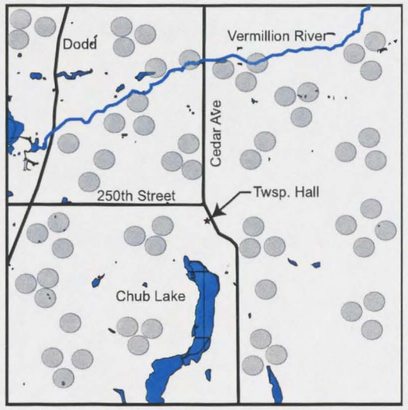
10-Acre Buildout Scenario: Shows what Eureka would look like if zoning were changed to allow residential development on all parcels of 10 acres or more.



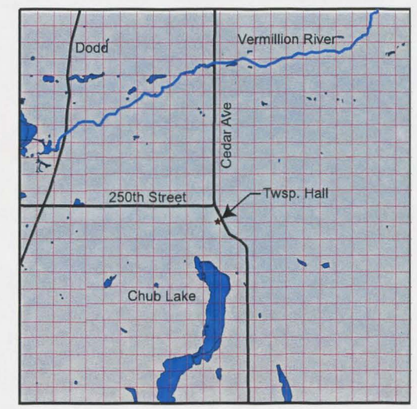
Town Center Scenario: Shows what Eureka would look like if zoning were changed to allow for creation of a densely developed town center (shaded) with commercial, residential, and mixed-use development.



Suburban Progression (Lakeville) Scenario: Shows what Eureka would look like if zoning were changed to allow commercial and residential development to occur at suburban densities (1/3-acre lots) within the northern (shaded) portion of Eureka.



Residential Cluster Scenario: Shows what Eureka would look like if zoning were changed to allow residential development at a net density of 10 acres, but with a requirement that new development be clustered (shaded circles) to preserve open space.



2.5-Acre Rural Estate Scenario: Shows what Eureka would look like if zoning were changed to allow residential development on all parcels of 2.5 acres or more.

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

III. Scenarios: Hybrid and Alternative Scenarios

A **hybrid scenario** is a combination of two or more of the six core **scenarios** considered in this report. Just as horticulturalists might cross two unique strains of corn to produce a hybrid that contains the best characteristics of both parent plants, the purpose of a hybrid scenario is to combine the best elements of each of the original core scenarios. For example, one could combine the Town Center Scenario, which focuses development on the geographic center of the township, with the Residential Cluster Scenario, which provides for residential development on **clustered** lots at a net **density** of 10 acres. This hybrid would provide ample opportunities for residential development while preserving **open space** (characteristics of the Residential Cluster Scenario), but it would also allow for a more densely developed township core that could provide a stronger sense of community identity along with opportunities for **mixed-use** residential and commercial development (characteristics of the Town Center Scenario).

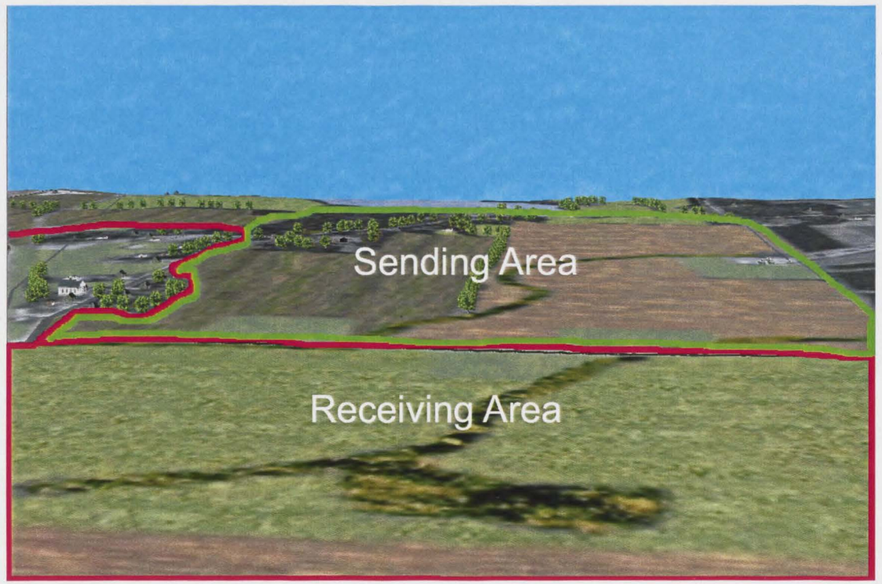
An **alternative scenario** is a variation of one of the six core scenarios that results when a new development approach or planning tool is introduced, or when one of the assumptions underlying the core scenario is significantly changed. What results is a scenario that differs in some substantial way from the original. The main advantage of an alternative scenario is that it provides a degree of flexibility that makes it possible to address unique situations that cannot be accounted for by the core scenario. For instance, the Residential Cluster Scenario portrays all residential development as occurring on 1-acre lots. However, it might be more appropriate to have a mix of lot sizes ranging from 1/3-acre to 2 acres in size. An alternative scenario showing a mix of lot sizes would be one variation of the Residential Cluster Scenario. Sometimes assumptions underlying a scenario can change unexpectedly as well, making an alternative scenario necessary. For example, the location for the **town center** in the Town Center Scenario was chosen based on where the current town hall is located, and because this area is in the geographic center of Eureka Township on a major county highway. But what if the township decided to build a new town hall on the corner of Highview Avenue and 267th Street? Given that one of the assumptions underlying the original choice of a town center location had changed, it might make sense to create an alternative scenario that locates the town center at the intersection of Highview and 267th.

At the public open house held in November 2002, many citizens provided suggestions and input on how certain scenarios might be altered or combined. The hybrid and alternative scenarios presented in this report represent the Envisioning Task Force's attempt to respond to this feedback. Hybrid and alternative scenarios help to fine-tune a community's vision of what the future might look like by acknowledging the many diverse and unique combinations of development patterns that could potentially exist. The six core scenarios presented in this report provide important and detailed information about the potential impacts of different patterns of development in Eureka Township. This information can provide the foundation for future discussions of land use and development in Eureka. However, ***it is important to remember that the core scenarios are only generic representations of possible growth patterns for the Township. More analysis, citizen input, and fine-tuning are necessary before any action is taken to develop a formal vision or plan for Eureka based on these scenarios.*** In the coming years, it is our hope that citizens will continue to offer their own hybrid and alternative scenarios because such visions of the Township are an important element in community discussions and decisions about the most appropriate approach to development.

III. Scenarios: Transfer of Development Rights (TDR)

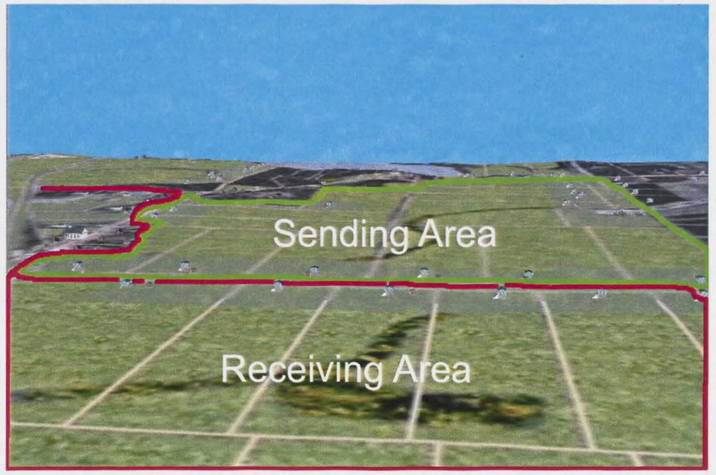
Transfer of Development Rights—Many of the hybrid scenarios utilize the concept of **transfer of development rights** (TDR). TDR is a powerful tool that can be used to protect farmland, **natural areas**, and overall **rural character** in Eureka while maintaining private landowner rights and equity. However, TDR does add a level of complexity that requires additional staff and expertise to ensure successful implementation. As recommended in the final section of this report, the Township would be well-served by establishing a citizen task force to more fully explore the concept of TDR and how it might apply to Eureka Township.

The basic premise of TDR is to direct development away from high-priority areas a community wants to protect **(sending areas)** and to direct development toward areas of the community that can better accommodate development **(receiving areas).** A balance of development and equity is created by allowing landowners in the sending area to sell development rights to landowners (developers) in the receiving areas. A developer buys the rights from a sending-area landowner to gain an opportunity to develop property in the receiving area at a greater density than the prevailing **zoning** would otherwise allow. By selling these rights, landowners in the sending area are able to enjoy additional equity from their land without having to develop their property, and developers in the receiving area are able to develop at greater densities. In the end, land in high-priority (sending) areas is protected, development occurs in more appropriate areas, and all landowners have the opportunity to receive greater equity from their property.



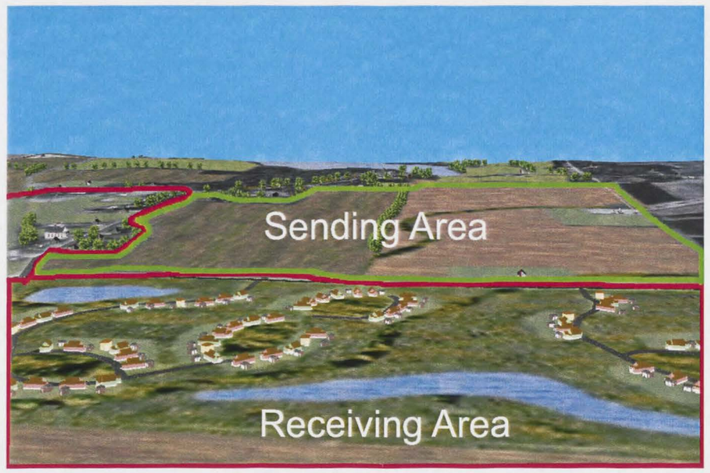
Existing Development Conditions with TDR Sending and Receiving Concept

Land in the sending area may be permanently protected by the placement of a **conservation easement.** A conservation easement is a legally binding contract that specifies what uses are allowed on the property and what uses are restricted. Conservation easements are flexible, and the terms of the easement vary depending on a landowner's needs and the protection goals established by the community.



Sprawling Development without TDR

or



Development Transferred to Receiving Area, with Land in Sending Area Permanently Protected

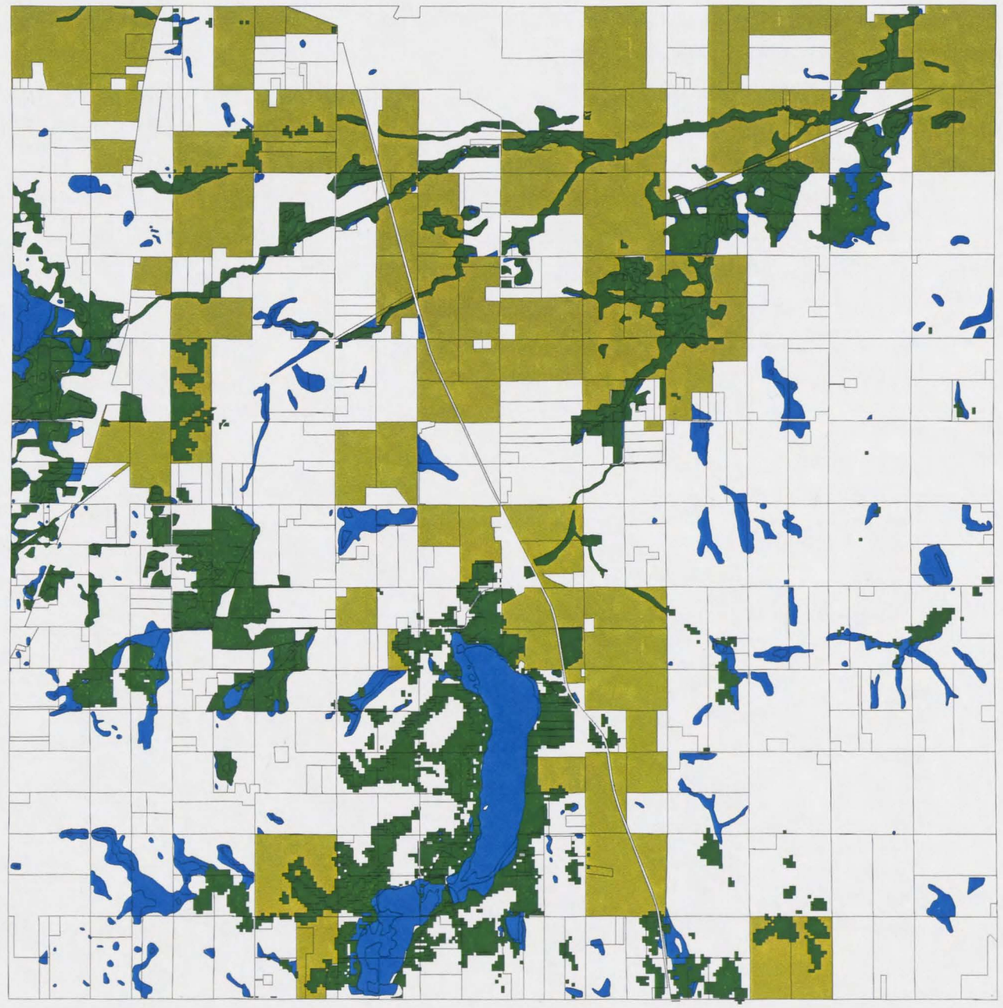
Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

III. Scenarios: Purchase of Development Rights (PDR)

Purchase of Development Rights—In many respects, a **purchase of development rights** (PDR) program is similar to a **transfer of development rights** (TDR) program. The major difference is that instead of transferring the right to develop from one property to another, the right to develop is purchased by a third party (such as a governmental authority) and is retired permanently. PDR programs focus on protecting a resource. Whether the resource is farmland or **natural areas** depends upon the details of the program, but a map that clearly identifies these areas is critical to the success of the program. Both PDR and TDR programs are voluntary and both programs attempt to direct development into the most appropriate areas while protecting areas identified as important resources to the community. Landowners who decide to sell their development rights are required to place a **conservation easement** on their property and manage their property in an appropriate manner to protect the resource (farmland or natural area). The monetary compensation for selling development rights varies depending upon the appraised value of the property, and ultimately is determined through negotiation between the interested parties. For additional information on PDR or TDR, consult the list of additional resources in Appendix A. The remainder of this page and the following two pages discuss how PDR and TDR might work hypothetically in Eureka Township and how these two programs factor into the **hybrid** and **alternative scenarios** presented later in this section.

As discussed on page 20 of this report, Dakota County is implementing a county-wide PDR program under the **Farmland and Natural Areas Project** (FNAP). The program began in the fall of 2003. Landowners who qualify under the eligibility criteria for the County's PDR program have the opportunity to sell their right to develop their property in exchange for a purchase price that the landowner and County agree on. Currently, $20 million dollars is available in the County program, with a high expectation that these dollars will be matched by programs like Metro Greenways or the Federal Farmland Protection Program.

The map on this page shows farmland and natural areas in Eureka Township that are eligible for participation in the program. Interested landowners should contact Dakota County for more information at 651-891-7022.



Eligible Natural Areas

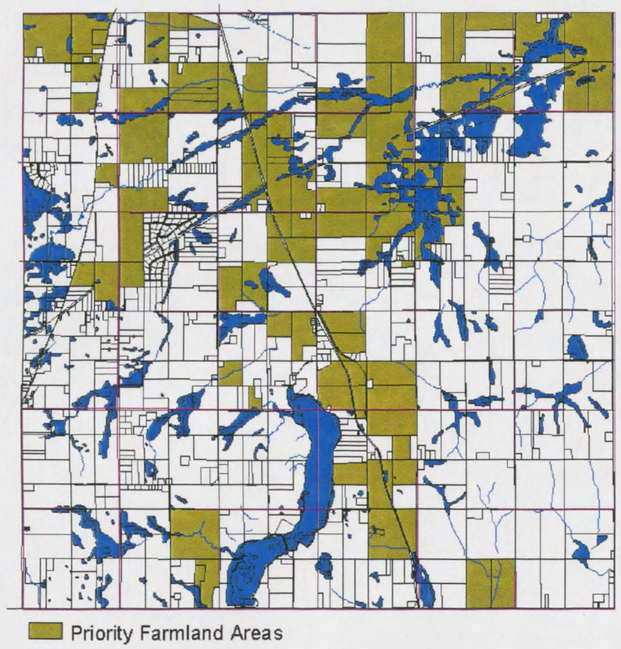
Eligible Farmland

Wetlands

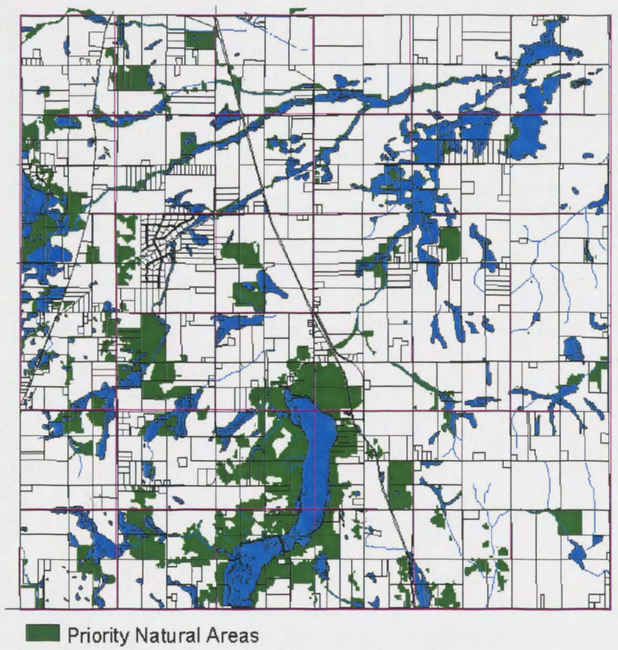
III. Scenarios: Transfer of Development Rights—Eureka Township Draft Concept

The TDR Concept—The following page illustrates three hypothetical **transfer of development rights** (TDR) concept maps for Eureka Township. Although these maps display different approaches to TDR in the Township, all three share common elements. Each approach is based on protecting priority farmland and **natural areas**, as well as connecting priority areas through **greenway corridors,** while allowing some development in more appropriate areas of the Township. This page shows the three base maps that were used to identify possible TDR **sending areas** and **receiving areas** in the Township. Potential greenway corridors (below right) were identified based on the Dakota County **Farmland and Natural Areas Project** (FNAP) high-priority farmland map (below left) and the Dakota County Soil and Water Conservation District (SWCD) natural areas inventory map (below middle). The greenway corridor map is best thought of as an **overlay zone** that can be placed on top of a TDR concept map to identify high-priority areas for preservation.

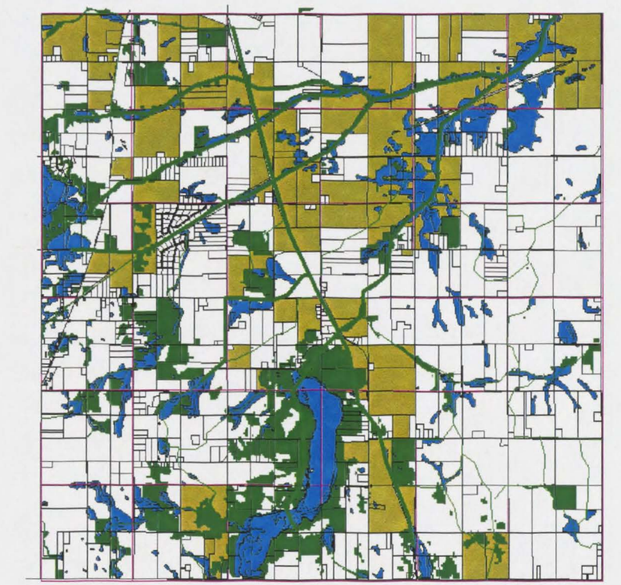
No matter what overall development approach is under consideration by the Township, the greenway corridor concept provides an opportunity to identify and ensure the protection of critical wildlife corridors, **open spaces,** and natural connections throughout the Township. The three maps presented on this page provide a foundation from which Eureka citizens can identify where critical natural resources are located and consequently where development may be more or less appropriate. This first critical step can help township citizens and officials understand how development will impact open spaces and the rural quality of life in Eureka. However, ***this is not to suggest that further refinement of the greenway corridor concept or a more thorough inventory of critical natural resource areas are not needed.*** For this reason, one of the most important recommendations presented in the final section of this report is to ensure ongoing citizen discussion of TDR, greenway corridors, and the idea of balancing growth with natural resource protection.



Dakota County FNAP Priority Farmland Areas



Dakota County SWCD Priority Natural Areas



Potential Greenway Corridors

III. Scenarios: Transfer of Development Rights: Eureka Draft Concept—Continued

This page illustrates three different TDR concepts for Eureka Township. For the purposes of creating **hybrid** and **alternative scenarios** for this report, only Concept Three was used. This is not to suggest that this concept was the preferred one; it was chosen largely because it is the only concept that followed section lines in the Township and it was therefore most easily integrated into **CommunityViz.** Because of their fragmented nature, the other two TDR concepts are more complex. It is important to remember that ***these maps represent only three among an unlimited number of possibilities; they are not intended as recommendations or plans*** for the final location of **sending** and **receiving zones.** Finally, the task force did not study or identify detailed implementation strategies for the TDR concepts. The hybrid and alternative scenarios that use TDR are intentionally general in nature and only attempt to demonstrate the basic concept of TDR. Further investigation of TDR is needed before a final TDR concept can be created for Eureka Township.

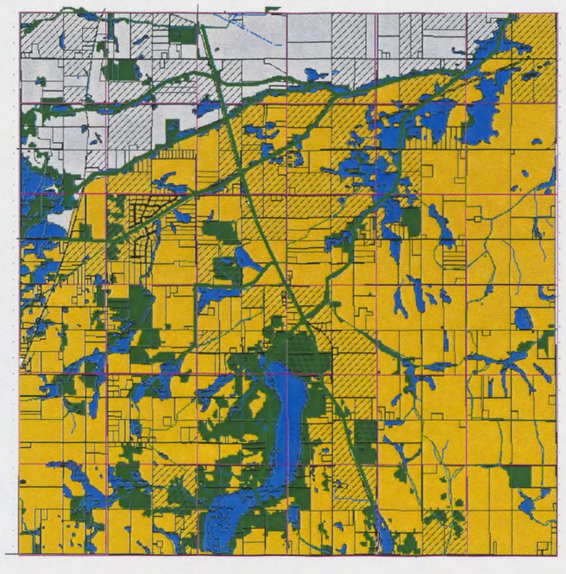
Concept One—Identifies only that portion of the Township north of the Vermillion River as a **receiving** (development) **area**, and the remainder of the Township as **sending** (preservation) **areas**. This concept acknowledges growth pressures from the north, but tries to maintain as much of the Township as possible as rural agricultural land.

Concept Two—Identifies two corridors of development along Dodd Boulevard and Cedar Avenue, culminating in the area identified as the hypothetical **town center** in the Town Center Scenario and the possible site of a new Eureka Town Hall.

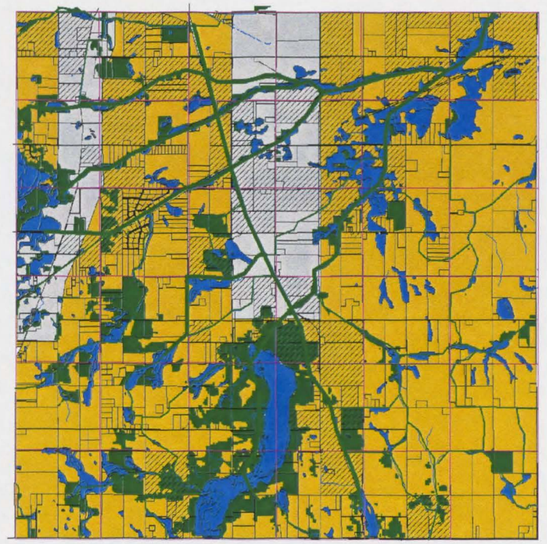
Concept Three—Expands the receiving (development) area to include the 13 sections located in the northern portion of the Township in close proximity to Dodd Boulevard and Cedar Avenue.

It is important to note that all three TDR concepts use the potential **greenway corridors** identified on page 32 as **overlay areas**. The intent of an overlay area is to create additional design guidelines that development must conform to in order to ensure greenway corridors are preserved and natural resources are protected. For residential development, this could translate into mandatory **cluster development** in these areas or larger dedication of park or **open space** areas.

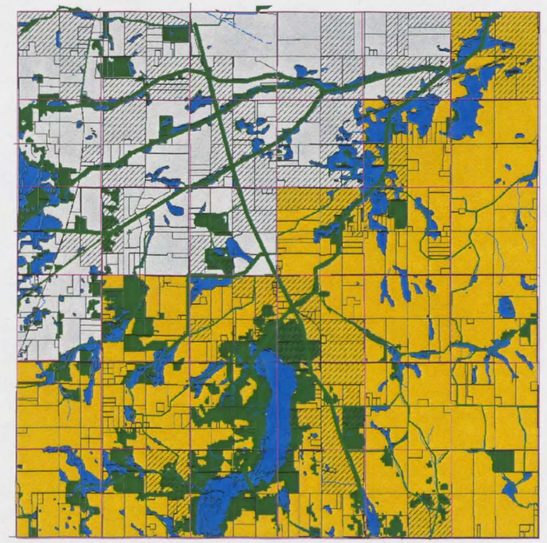
TDR Concept One



TDR Concept Two



Priority Farmland Areas
Priority Natural Areas
Receiving Area
Sending Area
Connecting Greenways (potential)
Major Greenways (potential)



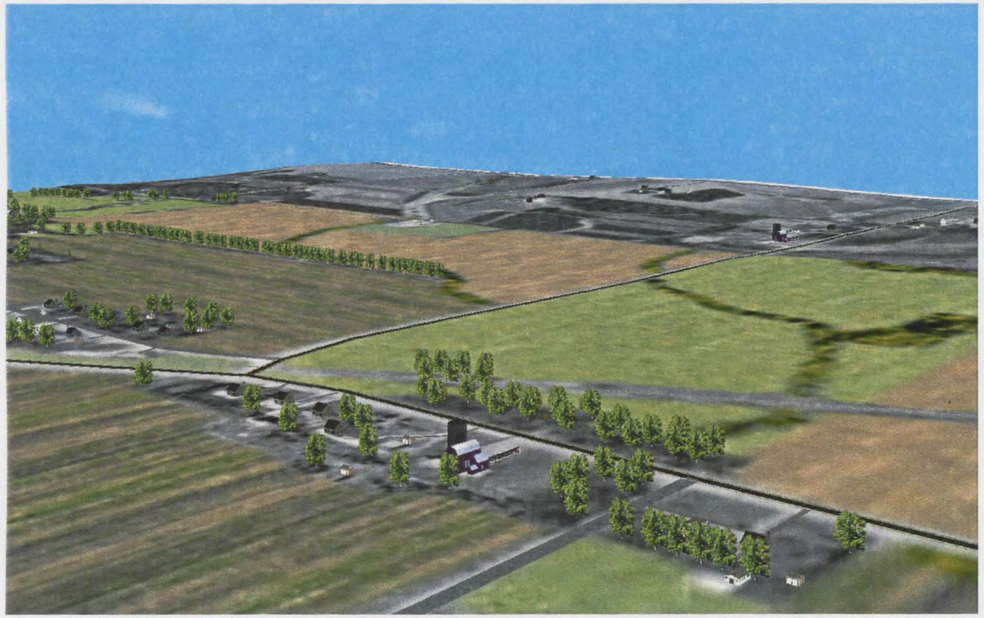
TDR Concept Three

III. Scenarios: Existing Conditions

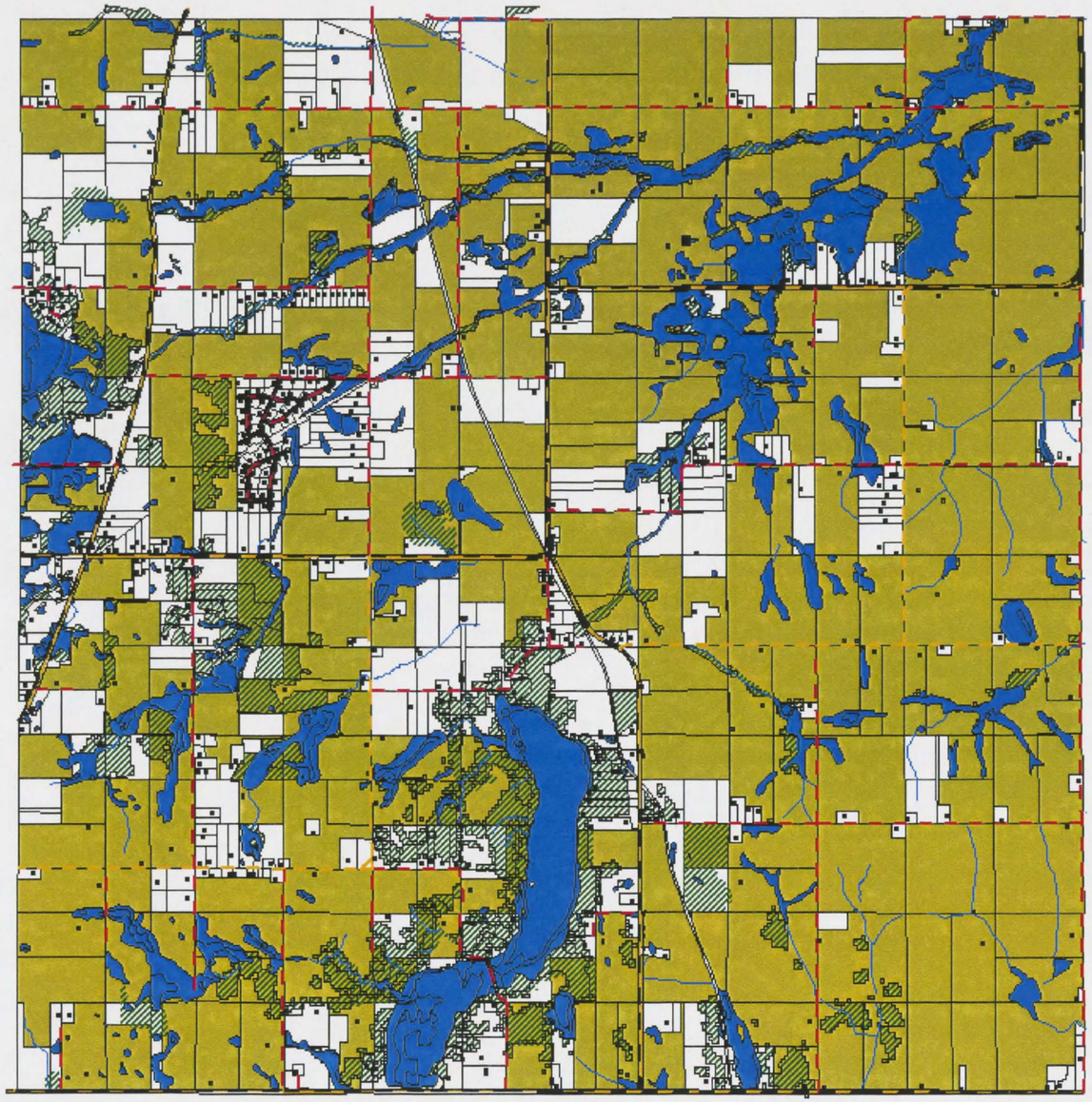
What is the current development pattern of Eureka Township?

Summary—This page shows the existing development pattern of Eureka Township. Undeniably, the current character of Eureka is rural and agricultural. According to Dakota County, approximately 292 landowners are currently enrolled in the tax-deferred farmland protection programs **Agricultural Preserves** or **Green Acres.** The total land area accounted for under these programs in Eureka Township is 15,685 acres. The Vermillion River, Chub Lake, and many tributaries and **wetlands** also contribute significantly to the **rural character** of Eureka.

According to the 2000 U.S. Census of Population, Eureka Township had 1,490 residents, 496 households, and an estimated 449 school-aged children.



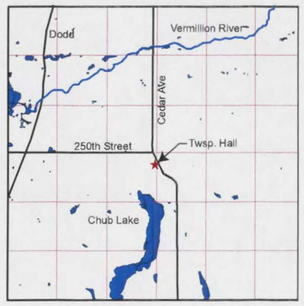
Intersection of 250th Street and Cedar Avenue (looking west)



Existing Conditions in Eureka Township

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development



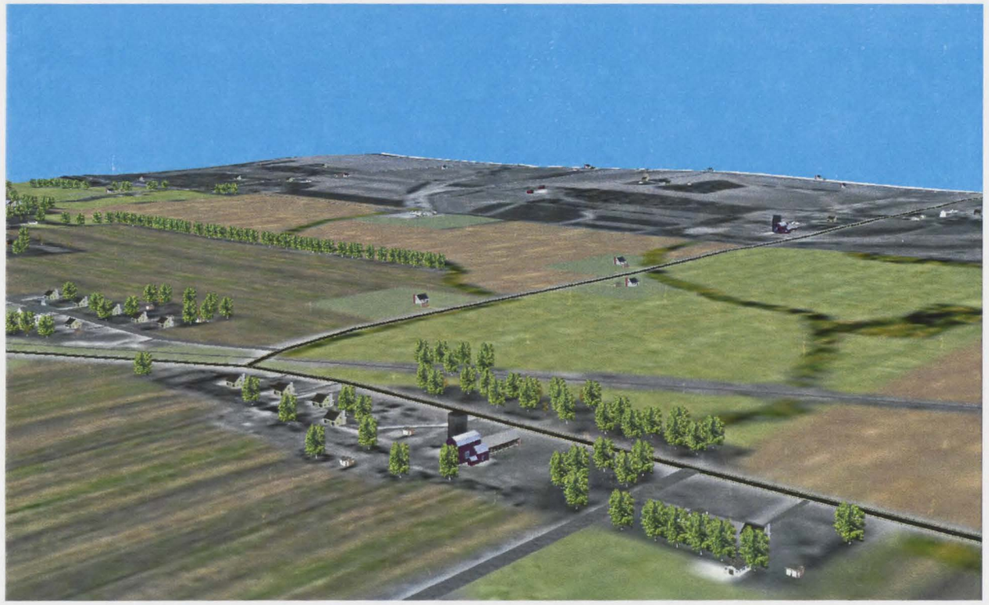
III. Scenarios: Current Zoning Buildout Scenario

What if Eureka Township maintained its current one house per quarter-quarter section zoning?

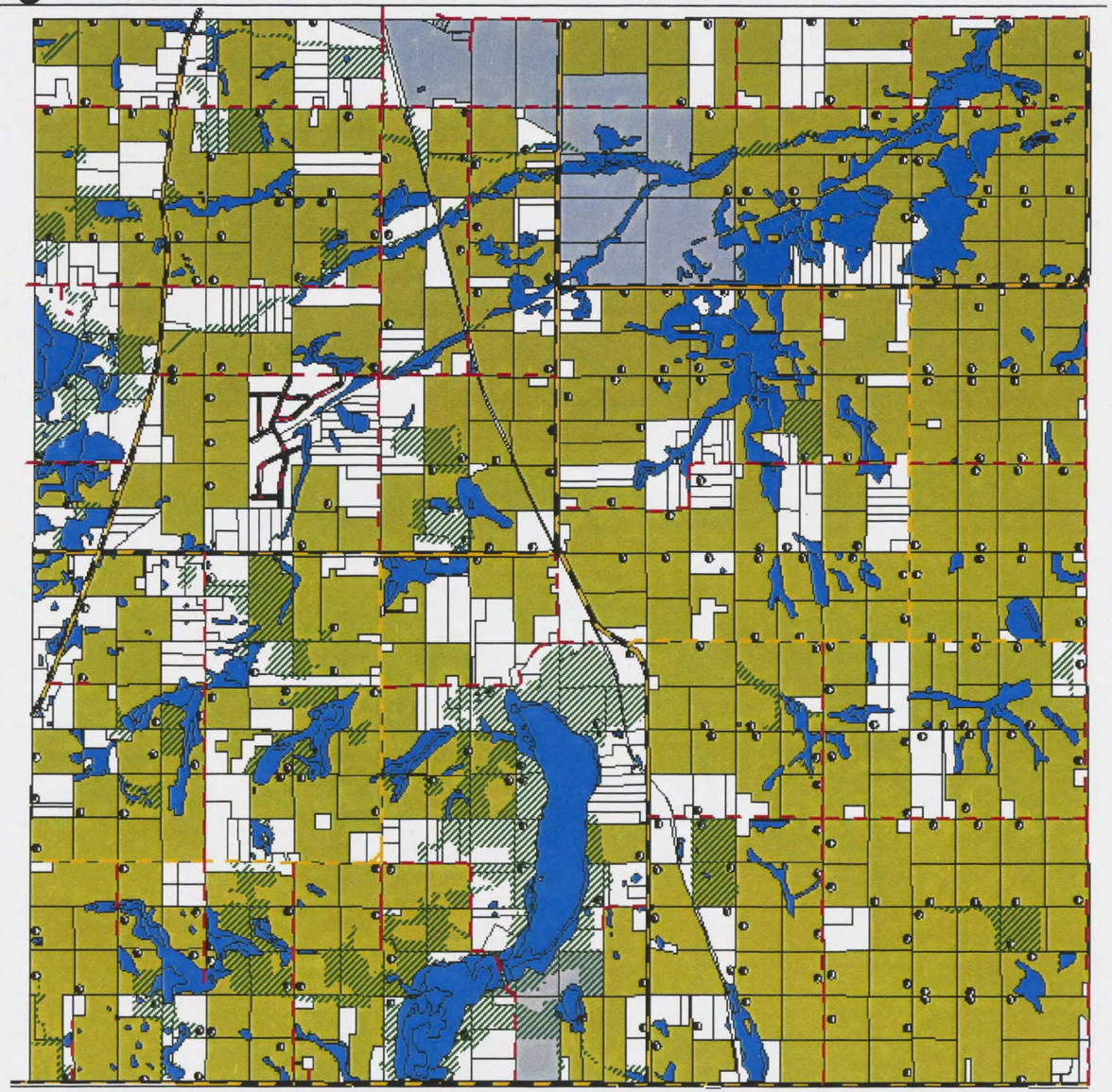
Summary—This scenario shows a future **buildout** of Eureka Township under its current **zoning** density of one home per quarter-quarter section. A buildout assumes that all parcels that can be developed are developed.

As depicted on this page, the Current Zoning Buildout Scenario would result in an additional 284 households, 852 residents, and approximately 257 school children.

(NOTE: Please contact Eureka Township for a detailed explanation of quarter-quarter zoning, which is beyond the scope of this report. Although this zoning density can be thought of conceptually as one home per 40 acres, this is an oversimplification.)



Intersection of 250th Street and Cedar Avenue (looking west)



Eureka Township with Full Buildout at Current Zoning

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

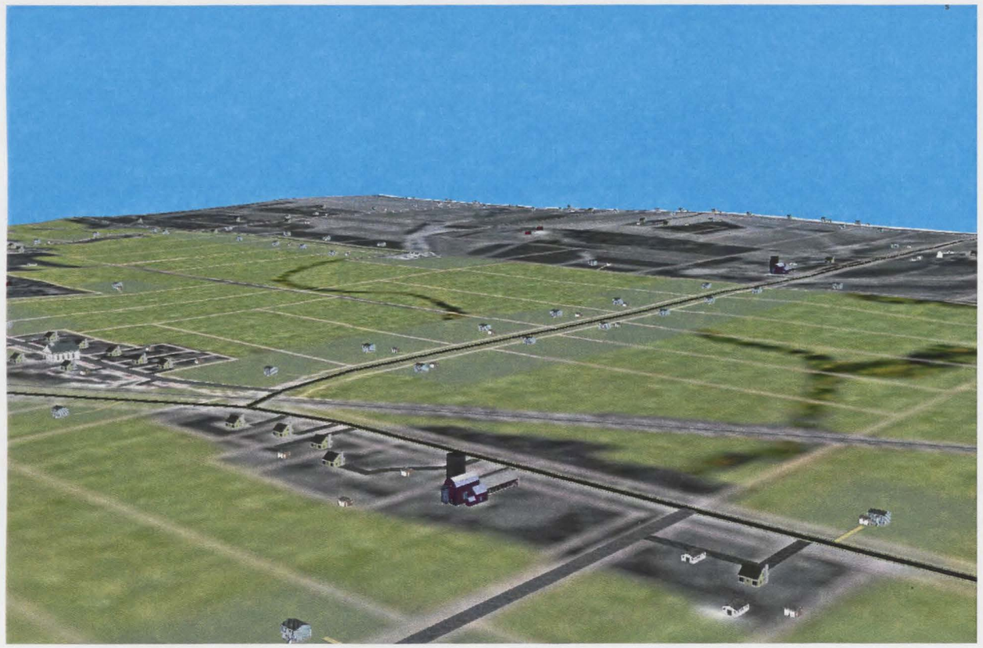
Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development

III. Scenarios: 10-Acre Buildout Scenario

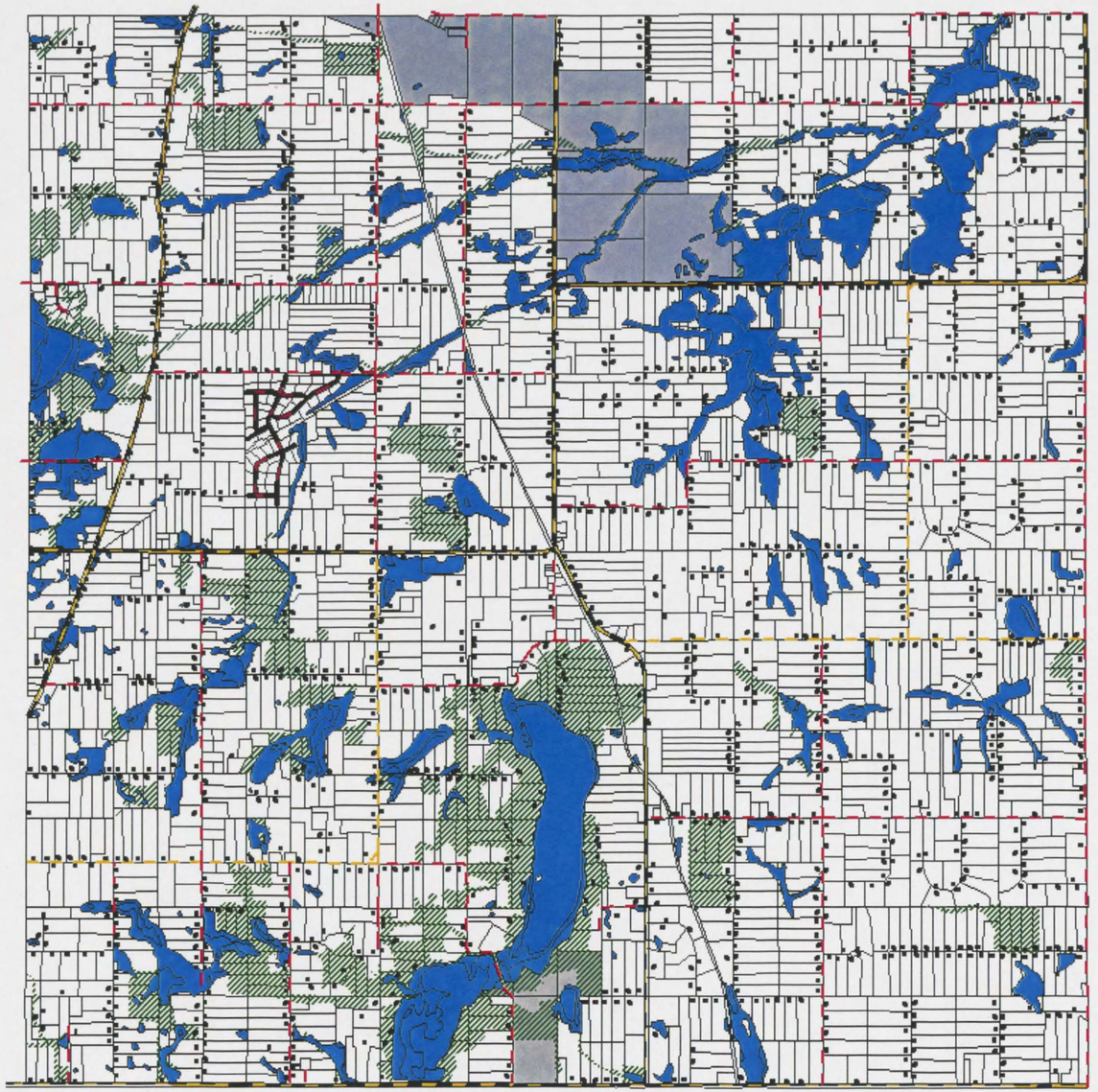
What if the current zoning is changed to allow parcels of 10 acres or more to have residential development?

Summary—The 10-Acre Buildout Scenario illustrates what Eureka Township would be like if the current **zoning** was changed to allow residential development on all parcels of 10 acres or more. This scenario assumes that the entire township would be zoned as 10-acre minimum lot size.

As illustrated on this page, the 10-Acre Buildout Scenario would result in an additional 1,527 homes, 4,581 residents, and approximately 1,382 school children.



Intersection of 250th Street and Cedar Avenue (looking west)

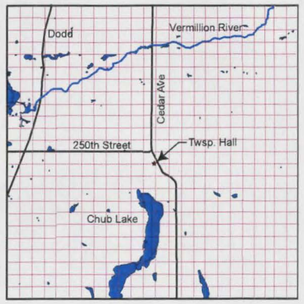


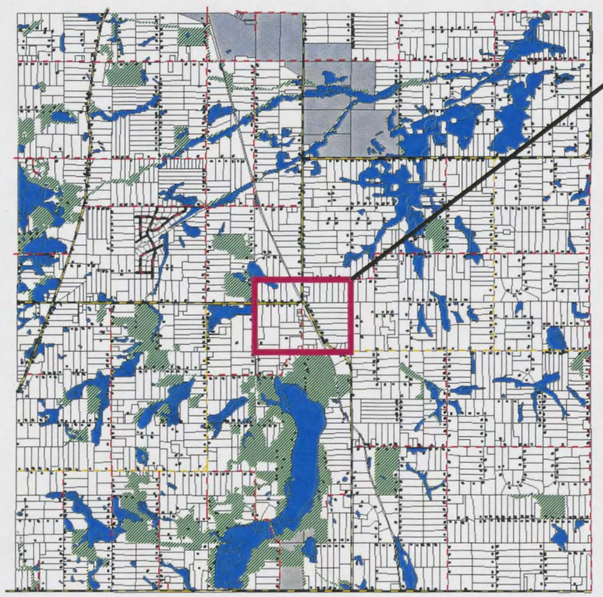
Eureka Township with Full Buildout at 10-Acre Zoning

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development

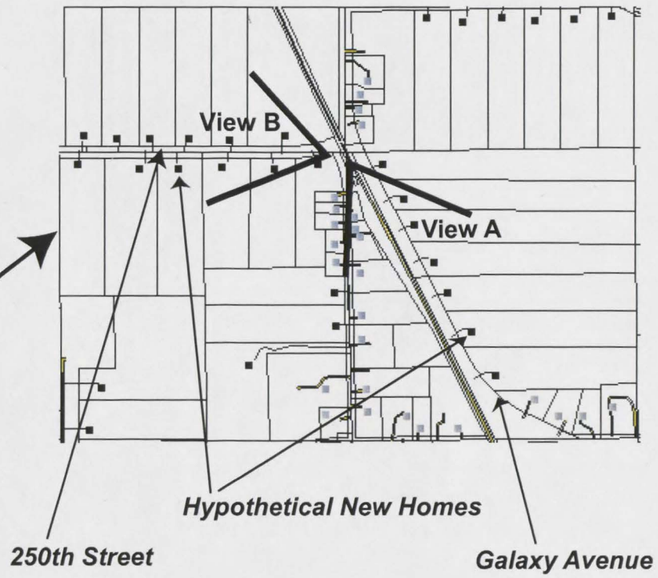
III. Scenarios: 10-Acre Buildout Scenario—Continued

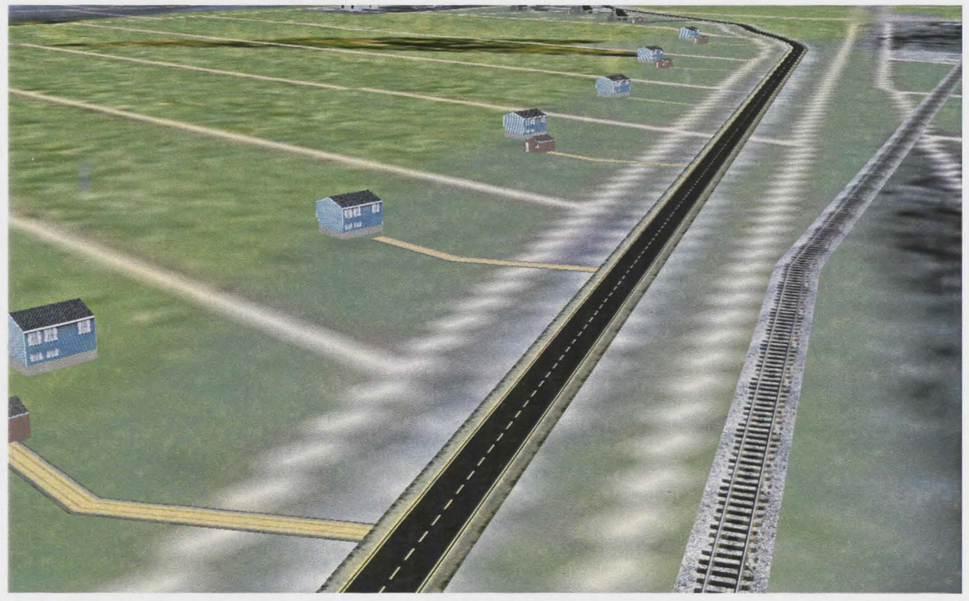




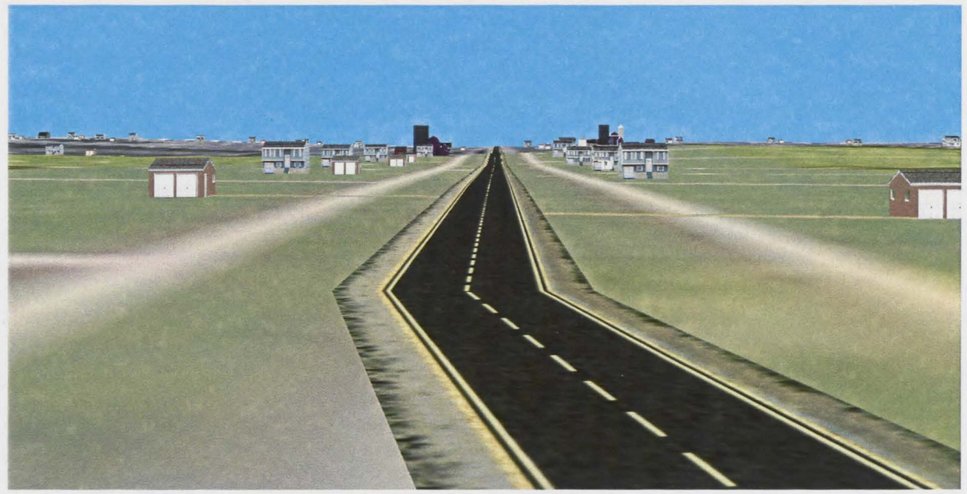
Eureka Township with Full Buildout at 10-Acre Zoning

Hypothetical Area Detail for 10-Acre Buildout Scenario





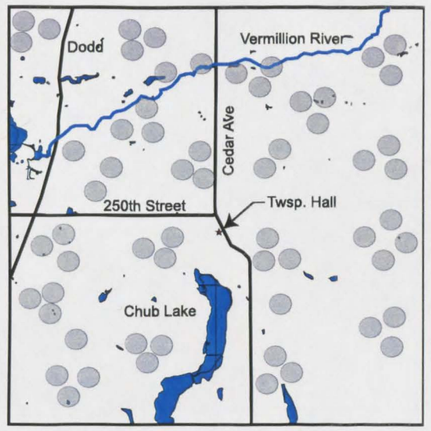
View A: Hypothetical View Down Galaxy Avenue (looking southeast)



View B: Hypothetical View Down 250th Street (looking west)

Creating the Buildout Vizualizations—Due to the large amount of potential development generated by the 10-Acre Buildout Scenario, it was not feasible to create a detailed site layout for the entire township. For the purpose of showing the visual impact of this scenario, a 480-acre area of detail (above) was chosen, and hypothetical building locations were generated using **CommunityViz**™ software.

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

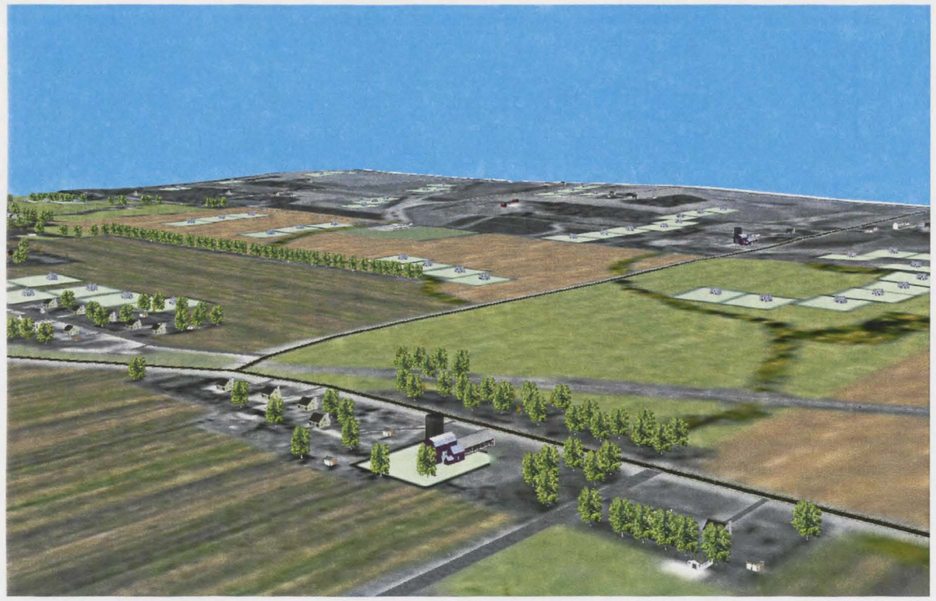


III. Scenarios: Residential Cluster Scenario

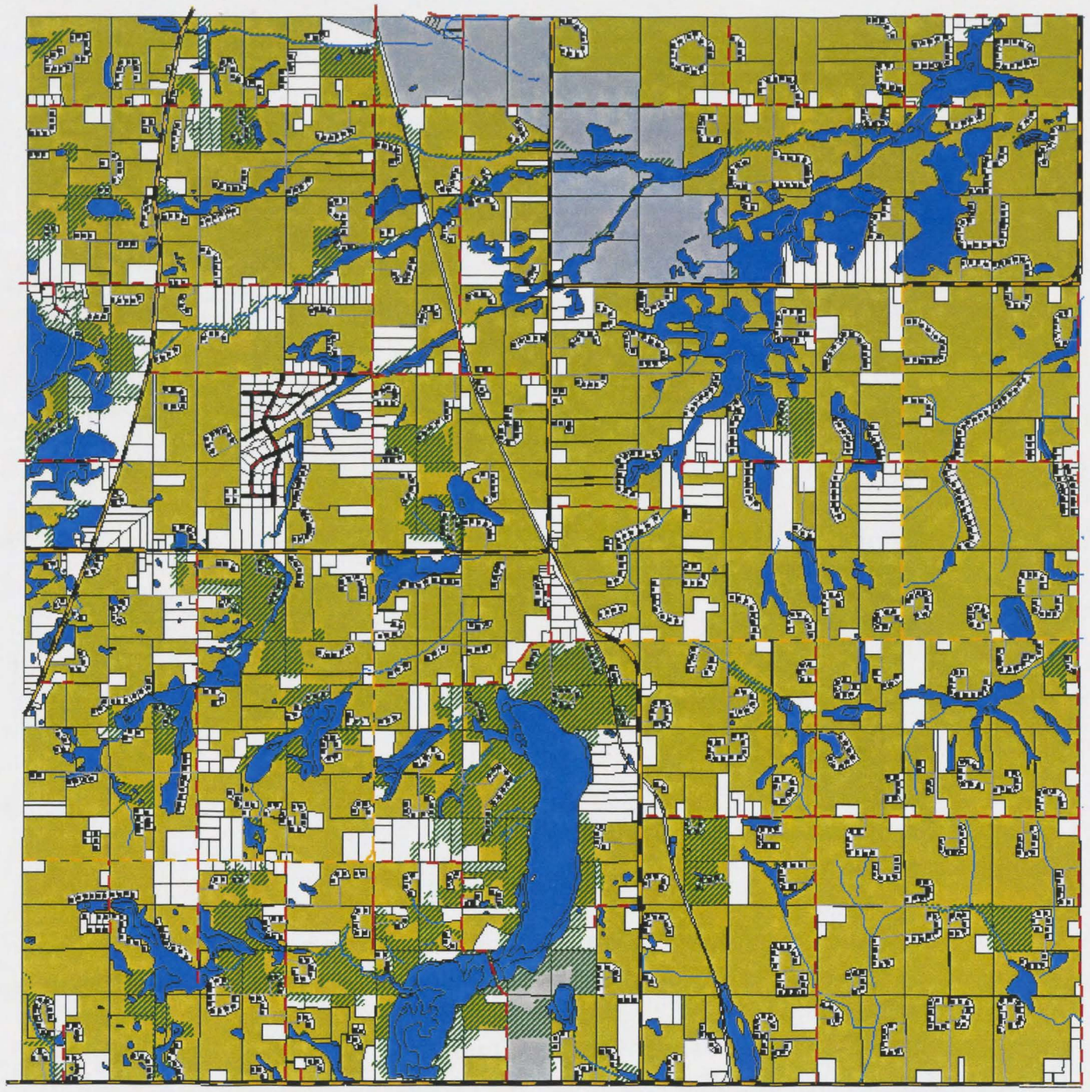
What if the current zoning were changed to require that new development is clustered in a manner that preserves some permanent open space?

Summary—This page illustrates how Eureka Township might look if the Township required future development to be **clustered.** For comparison purposes, this scenario assumes the same amount of growth (new homes) that could be accomodated by the 10-Acre Buildout Scenario (page 36). It provides for the same amount of development on less land, with the remaining land protected as **open space**. In this scenario, lot sizes are approximately 1 acre. However, several alternative lot sizes were investigated by the task force. One-acre lots represent the ***minimum-sized*** lot for individual **onsite wastewater treatment systems** with appropriate soil conditions. Final lot size should also consider land resources, cost, and potential for **community wastewater treatment systems.**

As shown here, the Residential Cluster Scenario would result in an additional 1,527 homes, approximately 4,581 new residents, and 1,382 additional school children (the same amount as under the 10-Acre Buildout Scenario depicted on page 36).



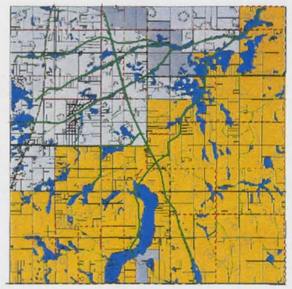
Intersection of 250th Street and Cedar Avenue (looking west)



Eureka Township with Full Buildout at Residential Cluster Zoning

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development

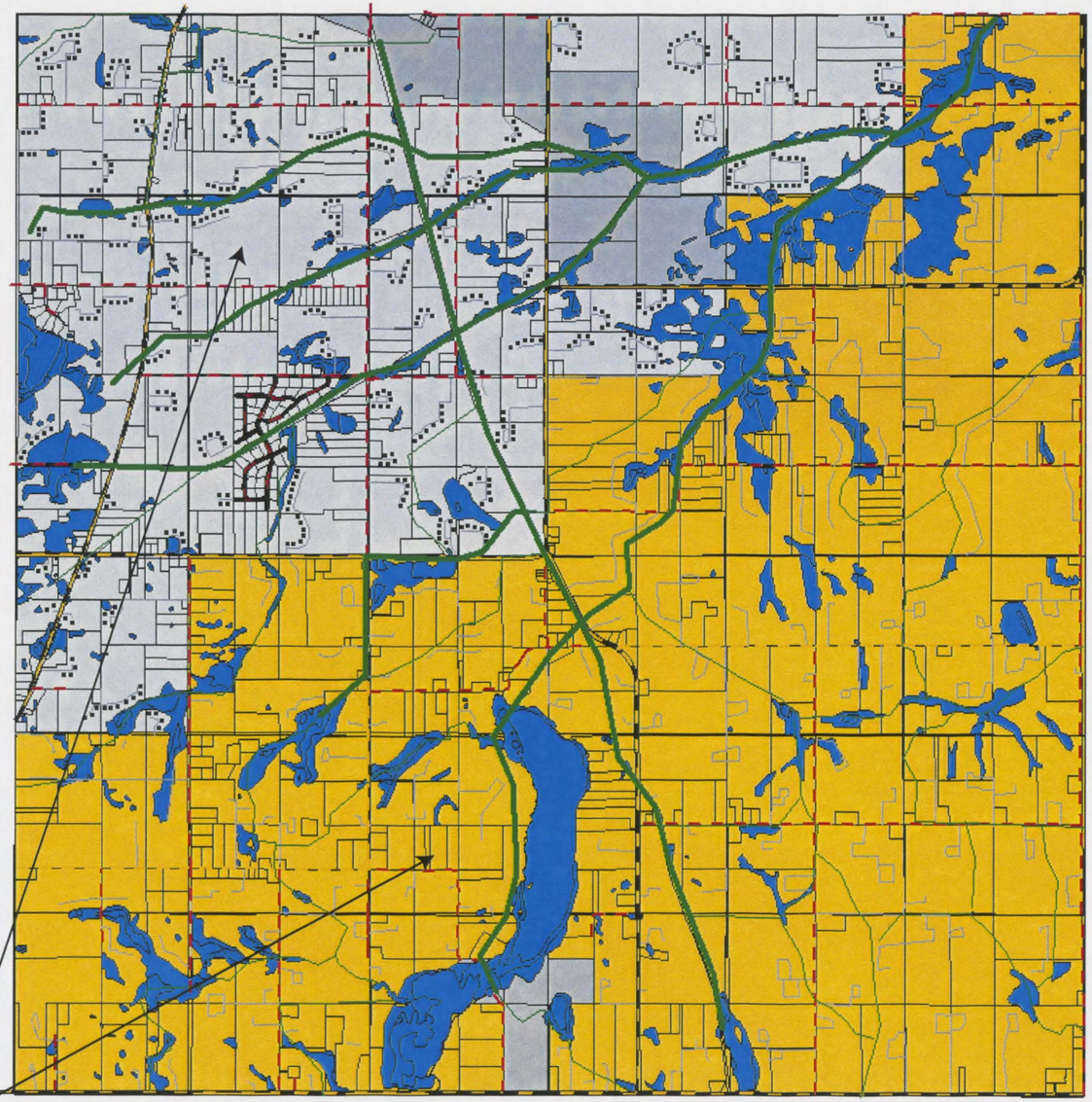


III. Scenarios: Residential Cluster Development—Alternative Scenarios

Overview—The task force considered several **alternative scenarios** to the Residential Cluster Development Scenario. The first alternative (illustrated to the right) incorporates the concept of **transfer of development rights** (TDR). This scenario would permit **cluster development** on small (1-acre) lots only in the TDR **receiving area**. As depicted on the map to the right, the number of **development rights** available for transfer (using a 1-credit-per-10-acre transfer ratio) would peoduce another 1,337 buildable lots in the Township.

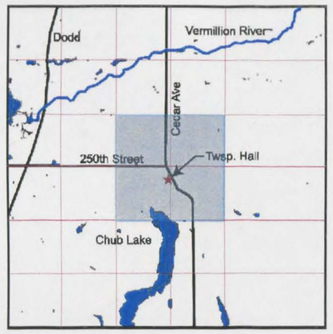
The other two alternative scenarios (not pictured) the task force considered used different implementation strategies for cluster development. Cluster development can be mandatory or voluntary. In a mandatory cluster situation, the local **zoning** authority requires that all development must occur in a manner that protects **open space** and preserves critical resources. In a voluntary situation, developers are provided with the option to use a traditional subdivision design or use cluster development. Although clustering is not required, incentives may be offered to encourage clustering. There is much debate over the merits of these two approaches. Although the task force did not attempt to resolve this debate, members did decide to investigate an alternative Residential Cluster Scenario that incorporated mandatory clustering within **greenway corridors** and other areas with significant natural resources (as identified earlier on page 32).

A third alternative scenario considered by the task force focused on appropriate lot sizes for cluster development. As with any type of development pattern, lot sizes in cluster developments can be highly variable. For the core Residential Cluster Scenario illustrated on the previous page, 1-acre lots were chosen. However, a cluster development could easily include a range of smaller or larger lot sizes depending on the goals of the community and the environmental constraints of the property. Usually if lots are smaller than 1 acre, some type of **community wastewater treatment system** is necessary. For the third alternative scenario, the task force chose to include varying lot sizes and incorporate the use of community (shared) septic systems to reduce the size of lots and preserve land as much as possible.



Alternative Residential Cluster Development Scenario with TDR

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.



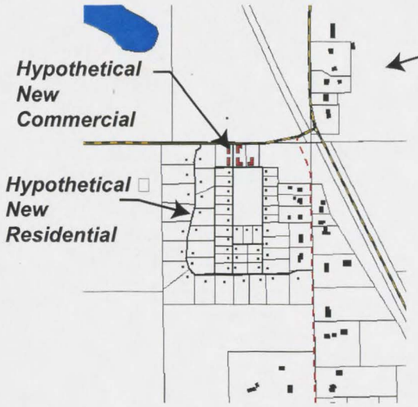
III. Scenarios: Town Center Scenario

What if the current zoning were changed to allow for the creation of a town center with elements of both small-scale commercial and residential development?

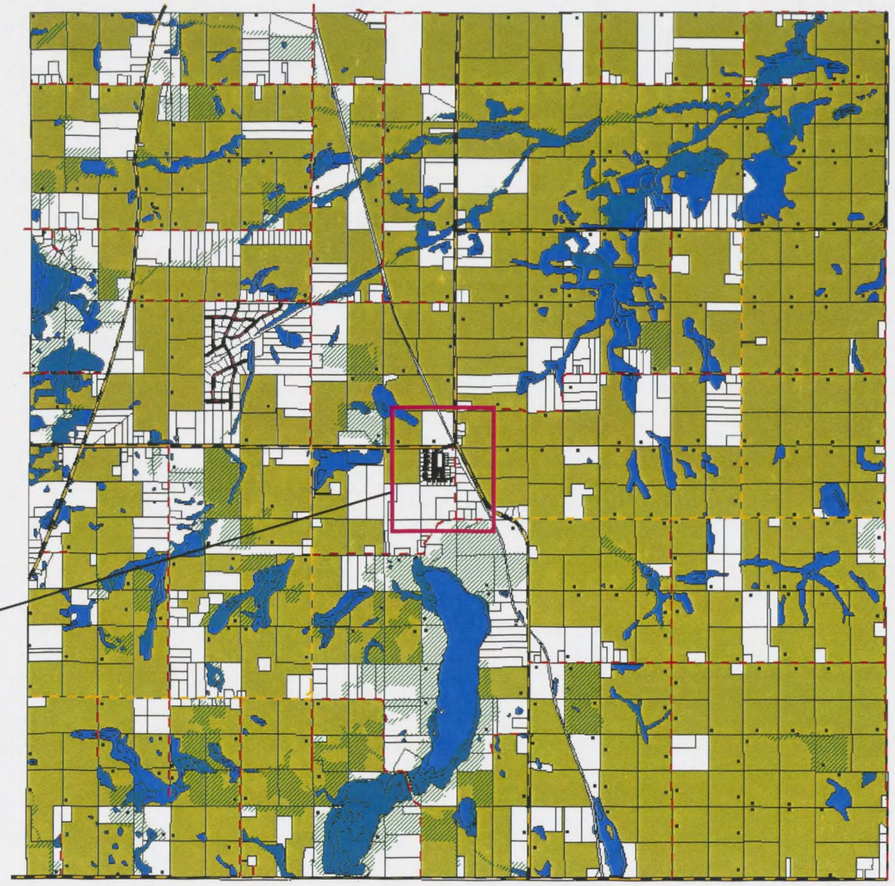
Summary—The Town Center Scenario explores the possibility of dense **mixed-use** commercial and residential development occurring within a small, central location in the community. The majority of future development within Eureka would occur in this designated area, while the remainder of the Township would develop at the current one house per quarter-quarter section **zoning** requirement.

A **town center** is not a regional commercial center. Instead, the town center would provide small-scale commercial development that primarily serves Eureka residents. Examples of this type of development include barbershops, restaurants, drug stores, small-scale office space, daycare centers, and convenience stores. Residential development could include a variety of housing types, such as single-family homes, duplexes, and apartments.

Intersection of 250th Street and Cedar Avenue (looking west)



Town Center Detail

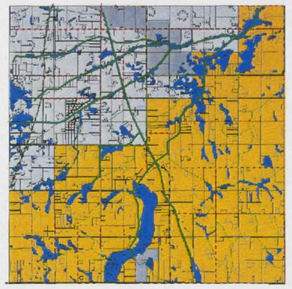


Eureka Township with Town Center Zoning and Quarter-Quarter Buildout

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

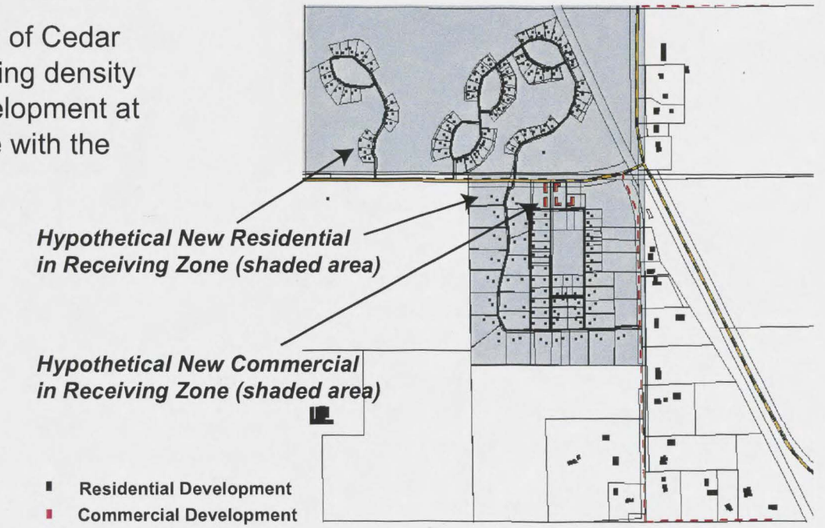
The task force explored several design options for the town center. The version presented on this page includes a public green space for community gatherings, anchored by the town hall and surrounded by residential properties. Commercial development is limited to one area. It is important to note that the task force did not attempt to specify the types of commercial or residential development in this design. The design was intended to be generic and focuses only on the general arrangement of buildings—in this case, around a traditional public green space. As depicted here, the Town Center Scenario would result in 344 additional homes, 1,032 additional residents, and 284 more school children.

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development
Commercial Development



III. Scenarios: Town Center Development—Alternatives and Hybrids

Overview—The original Town Center Scenario placed the town center at the intersection of Cedar Avenue and 250th Street, leaving the remaining areas of the Township at the current zoning density of one house per quarter-quarter section. This would allow a small amount of dense development at the town center site only. However, many **alternative** and **hybrid scenarios** are possible with the Town Center Scenario. Three such hybrids and alternatives are discussed on this page.



One possible hybrid would combine the Residential Cluster Scenario with the Town Center Scenario to create a core town center surrounded by a mix of residential **cluster development** and preserved **open space**.

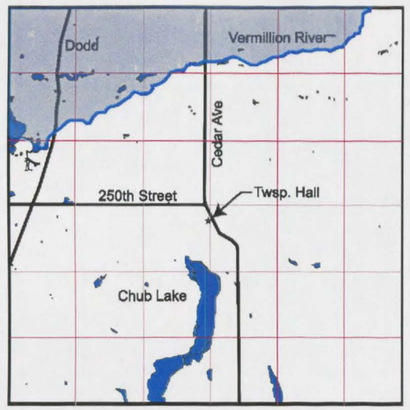
Task force members also created several hypothetical design alternatives to the original building layout for the Town Center Scenario. These alternatives (not pictured) demonstrate the wide-range of design possibilities and the importance of creating a Town Center design that fits with the character of the community

Finally, the illustrations on this page depict a hybrid that incorporates the use of **transfer of development rights** (TDR). This hybrid combines the Town Center Scenario with the Residential Cluster Scenario, but allows cluster development only within the TDR **receiving area** (shaded in gray). The scenario assumes the **sending area** (unshaded) has a **base density** of 1 home per 40 acres, but that landowners in the sending area would be allowed to sell development rights at 1 credit per 10 acres of land.

Detail of Hybrid of Town Center and Residential Cluster Scenario with TDR

Detail of Hybrid of Town Center and Residential Cluster with TDR

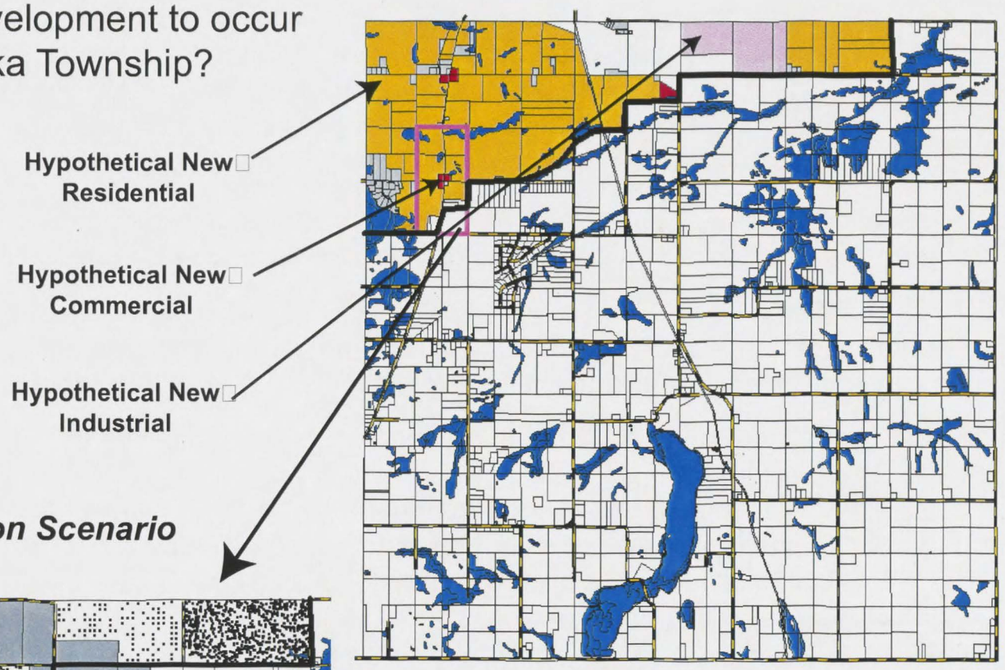
Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.



III. Scenarios: Suburban Progression Scenario

What if the current zoning were changed to allow development to occur at suburban densities in the northern portion of Eureka Township?

Summary—The Suburban Progression Scenario attempts to illustrate what Eureka Township might look like if suburban-style development is allowed. This **scenario** is intended to represent what could happen if the northern portion of Eureka develops like Farmington or Lakeville. The basic development pattern for this scenario is 1/3-acre residential lots with city sewer and water service. This scenario would require Eureka Township to construct a **community wastewater treatment facility** or connect to existing metropolitan urban services. For purposes of this hypothetical scenario, the northern portion of the Township was used, with the Vermillion River providing a natural boundary between the suburbanized area and the rest of Eureka.



Eureka Township with Full Buildout at Suburban Progression Zoning

Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

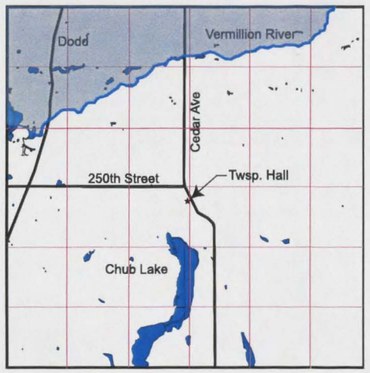
Creating the Buildouts—Due to the large amount of potential development generated by the Suburban Progression Scenario, it was not feasible to create a detailed site layout for the entire development area. For the purpose of showing the visual impact of this scenario, a 228-acre area of detail was chosen and hypothetical building locations were generated using **CommunityViz**™ software.

Hypothetical Area Detail for Suburban Progression Scenario

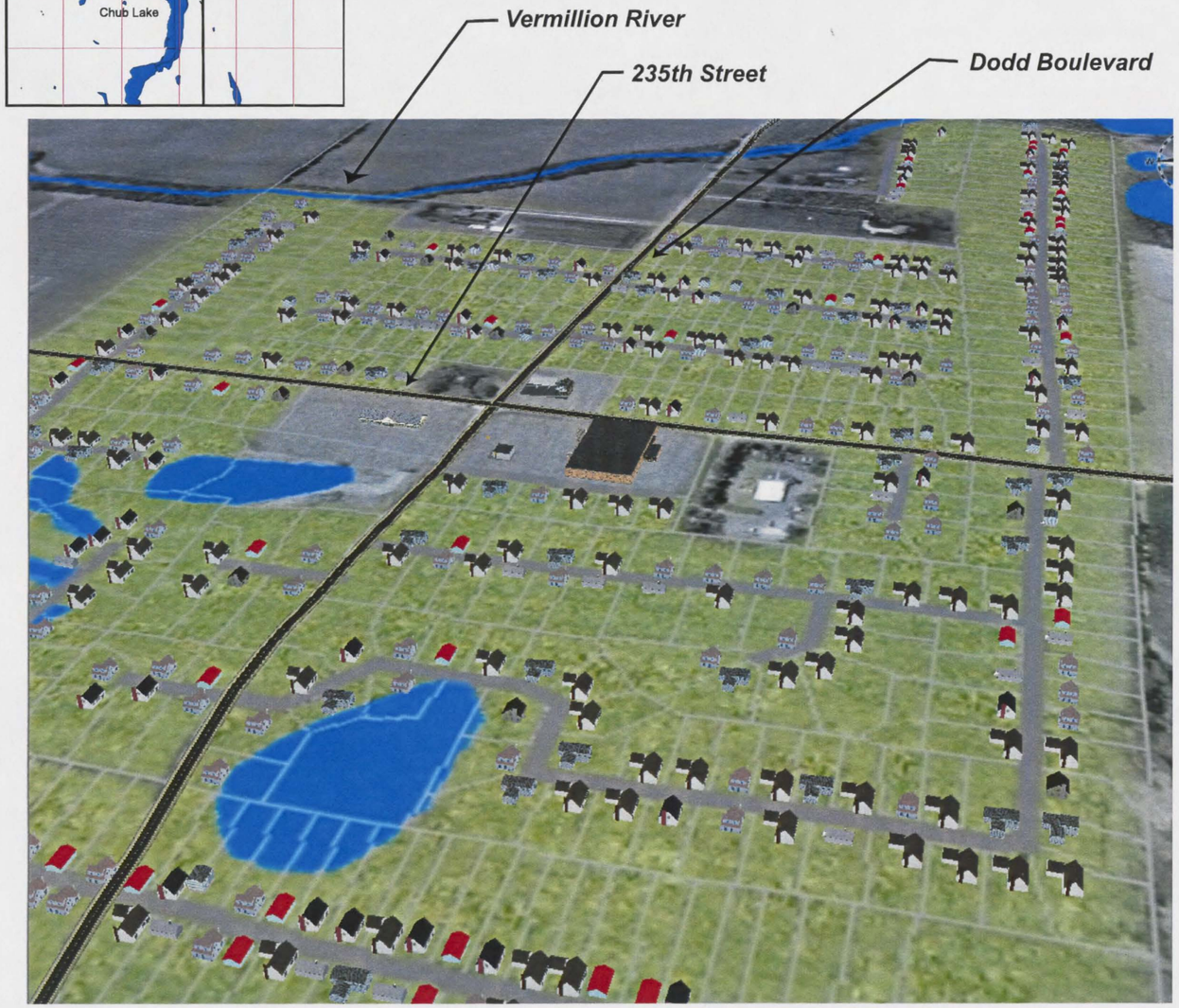
Two different methods were used to calculate the total amount of new development in the Suburban Progression Scenario. The first method was to simply divide the total undeveloped acreage of each existing parcel by 14,520 square feet (1/3 acre). This mathematical **buildout** resulted in 6,836 potential new homes in the entire suburban progression area and 687 potential new homes in the area of detail. The second method utilized a unique buildout feature of CommunityViz software that allows the user to account for nonbuildable areas. The CommunityViz buildout resulted in 6,120 potential new homes in the entire suburban progression area and 609 potential new homes in the area of detail. Because the CommunityViz calculation took into account some mitigating physical features, these numbers were ultimately used to generate **indicator** results for the Suburban Progression Scenario (see Section IV).

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development
Commercial Development

III. Scenarios: Suburban Progression Scenario—Continued

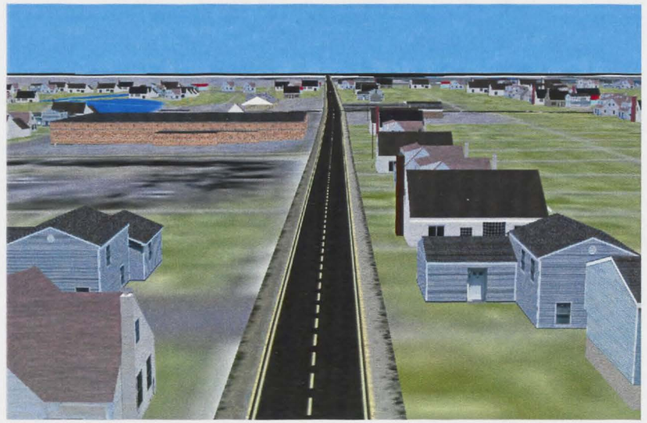


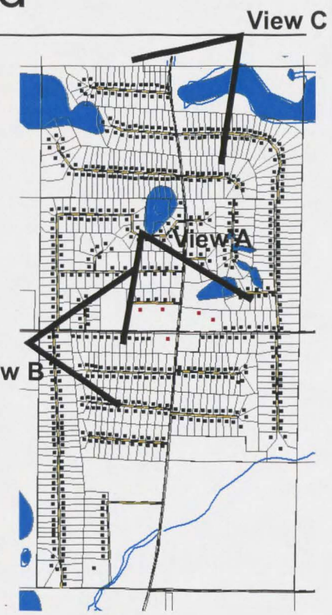
Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.



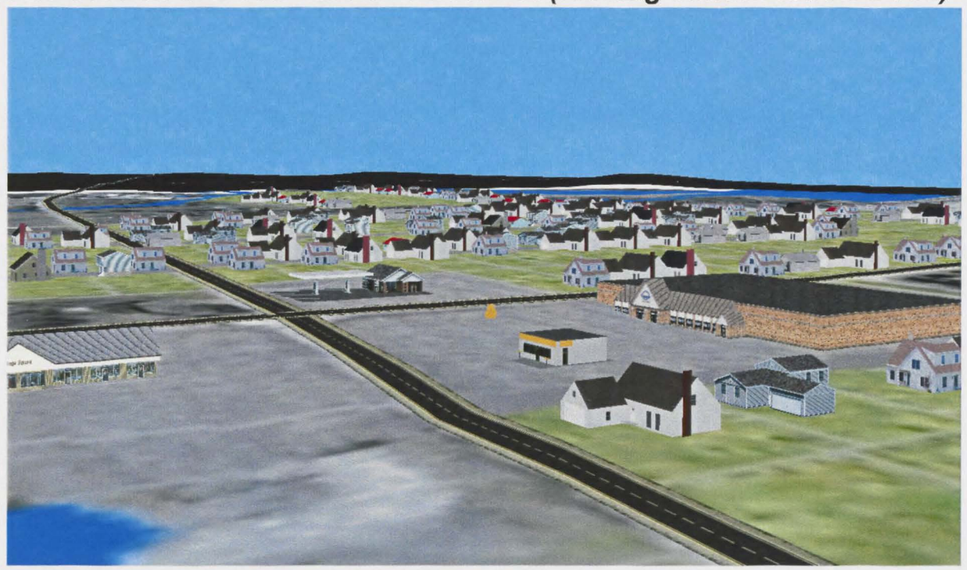
View A: Hypothetical Detail of Suburban Progression Scenario (looking south)

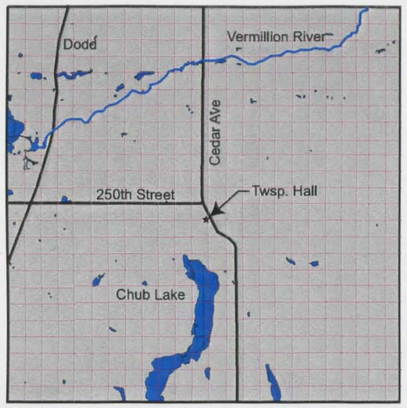
View B: Hypothetical View of 235th Street West of Dodd Boulevard (looking east)





View C: Hypothetical Detail of Commercial Big Box Development at Intersection of Dodd Blvd and 235th St (looking southwest on Dodd)



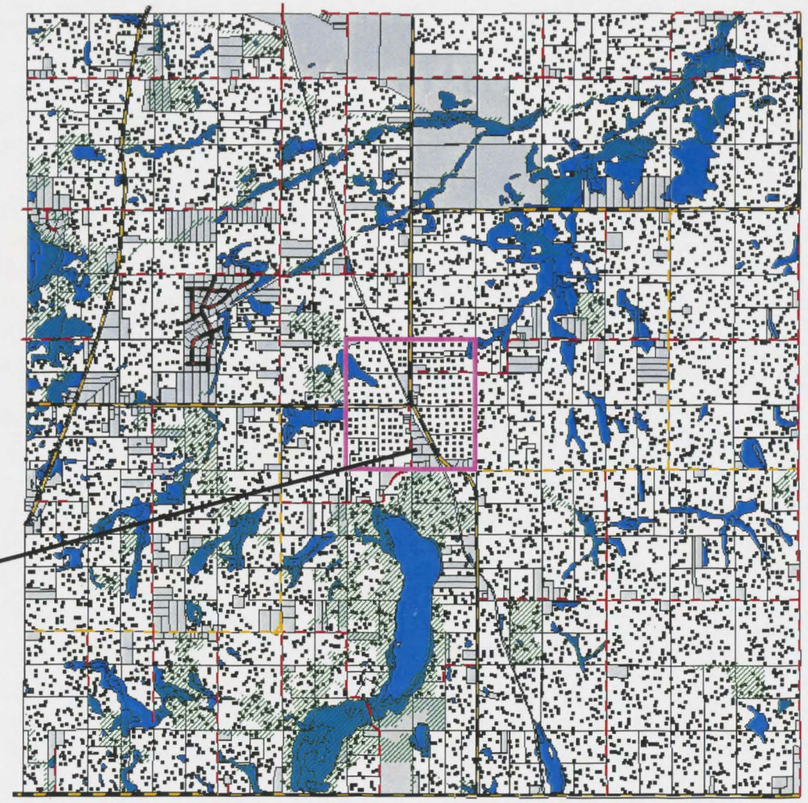


III. Scenarios: 2.5-Acre Rural Estate Scenario

What if the current zoning were changed to allow development to occur at rural estate (2.5-acre) densities throughout Eureka Township?

Summary—The 2.5-Acre Rural Estate Scenario attempts to illustrate what Eureka Township might look like if it were to develop similar to nearby Credit River Township in Scott County. The **scenario** assumes that a minimum density of 2.5 acres would be established throughout the township and that individual **onsite wastewater treatment systems** (such as individual or shared septic systems) would be used.

Creating the Buildout Vizualizations—Due to the large amount of potential development generated by the 2.5-Acre Rural Estate Scenario, it was not feasible to create a detailed site layout for the entire township. For the purpose of showing the visual impact of this scenario, a 645-acre area of detail (shown below) was chosen and hypothetical building locations were generated using **CommunityViz**™ software.



Eureka Township with Full Buildout at 2.5-Acre Rural Estate Zoning

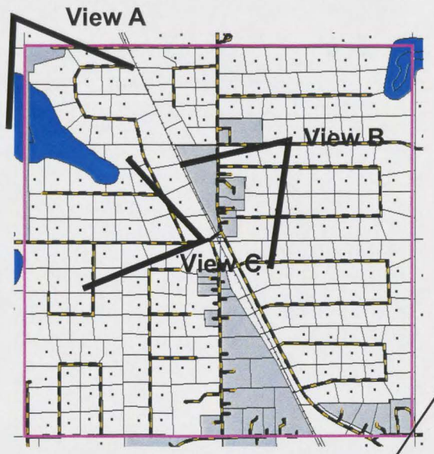
Hypothetical Detail Area for 2.5-Acre Rural Estate Scenario

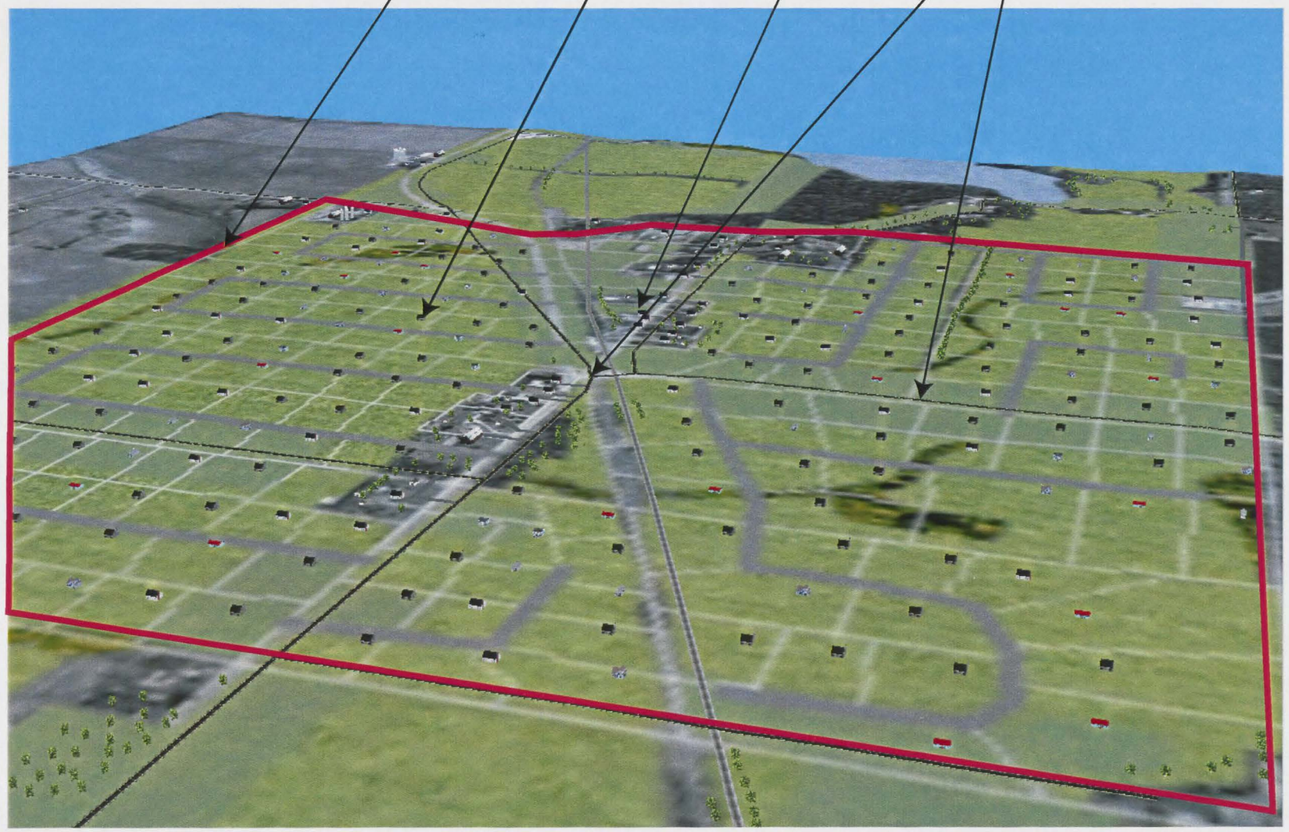
Note: Scenarios presented in this report are hypothetical growth scenarios only; they are not intended as recommendations or plans for future development in Eureka.

Two different methods were used to calculate the total amount of new development in the 2.5 Acre Rural Estate Scenario. The first method was to simply divide the total undeveloped acreage of each existing parcel by 2.5 acres. This mathematical **buildout** resulted in 7,715 potential new homes in the entire township and 269 potential new homes in the area of detail. The second method utilized a unique buildout feature of CommunityViz software that allows the user to account for nonbuildable areas. The CommunityViz buildout resulted in 6,766 potential new homes in the entire township and 207 potential new homes in the area of detail. Because the CommunityViz calculation took into account some mitigating physical features, these numbers were ultimately used to generate **indicator** results for the 2.5 Acre Rural Estate Scenario (see Section IV).

Non-Developable Land (political)
Surface Water and NWI Wetlands
Potential Farmland Remaining After Scenario Buildout
Twp. Gravel Rd.
Twp. Paved Rd.
County Gravel Rd.
County Paved Rd.
Priority Natural Areas
Residential Development

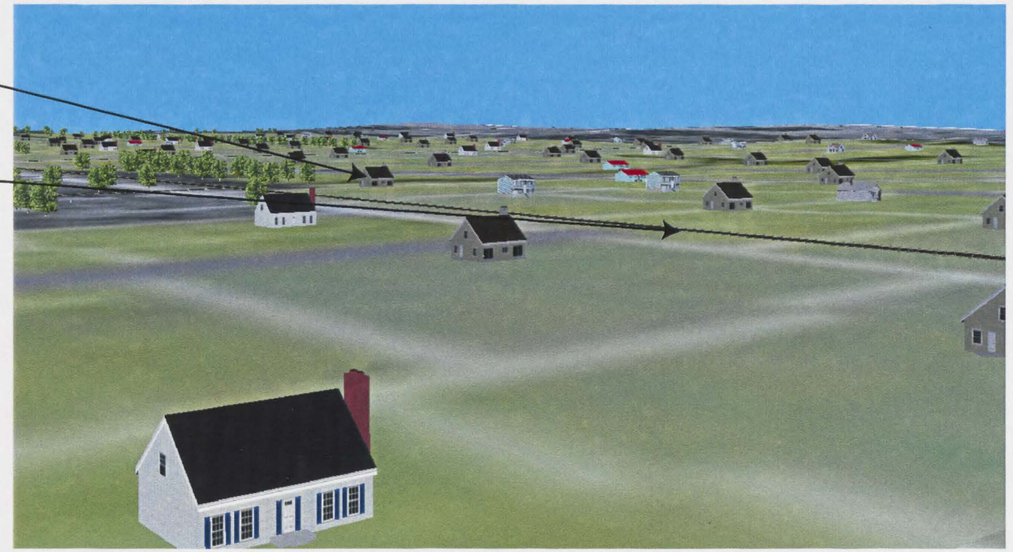
III. Scenarios: 2.5-Acre Rural Estate Scenario—Continued



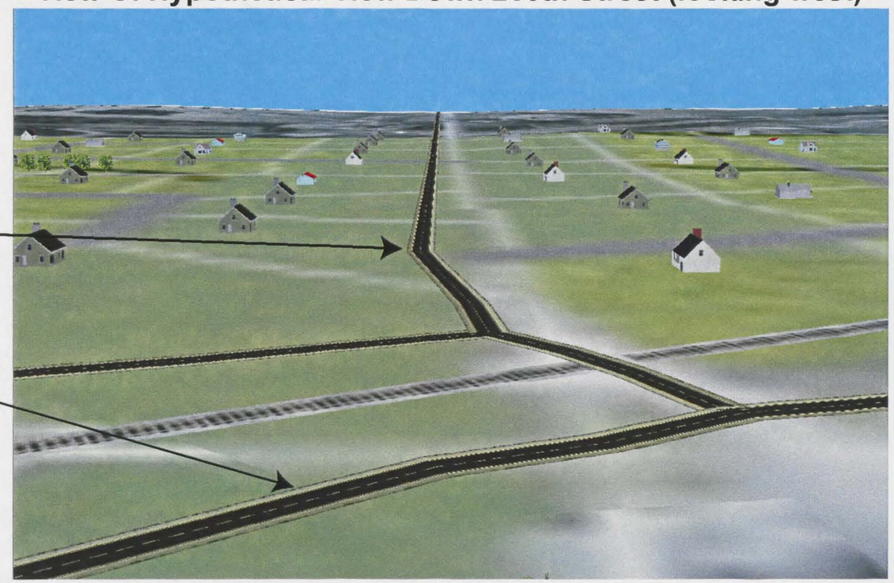


View A: Hypothetical Aerial Detail of 2.5-Acre Rural Estate Scenario (looking southeast)

View B: Hypothetical View Down Cedar Avenue (looking southwest)



View C: Hypothetical View Down 250th Street (looking west)



IV. Indicators: Introduction

As explained on page 9 of this report, an **indicator** is a feature of the township that could be impacted by future development in a way that is statistically predictable and measurable. Indicators allow comparison of the impacts of development on key issues of concern to township residents. For instance, according to the 2000 U.S. Census, there were 85 more people living in Eureka Township in 2000 than there were in 1990. The number of new Eureka residents identified by the U.S. Census is an indicator of current population growth in the Township. Because each **scenario** presented in this report assumes a different amount of growth, the number of potential new residents in the Township will be different under each scenario. Data on the number of potential new residents that a scenario would produce allows one to compare and contrast the likely impacts of each scenario on Eureka Township.

This section presents the results of the indicator analysis for the six core scenarios identified in Section III of this report. The purpose of this section is to provide a consistent means of comparing the six scenarios across a common set of indicators. Members of the Envisioning Task Force originally brainstormed a list of more than 50 indicators (see list at right) that they considered important to analyzing the impacts of growth and development. For the purpose of this report, the original list was narrowed down to 15 indicators. Selection of the indicators included here was based on several criteria, including (1) the perceived importance of the indicator in evaluating the impacts of development, (2) the degree to which the indicator could be quantified or measured, and (3) the availability of data sources. The list of indicators presented in this report is by no means exhaustive. Developing new indicators and refining existing indicators are important next steps as Eureka citizens look to the future and decide what they want their community to look like.

Many indicators used in this report are based on assumptions or data that may change over time. For instance, based on 2000 U.S. Census data, the average household in Eureka had 0.9 children under the age of 18. In calculating potential new school children for the scenarios in this report, therefore, it was assumed that each new household would produce 0.9 new school children. Fortunately, the CommunityViz software allows this (and other) assumptions to be easily adjusted to accommodate new data, changes in future circumstances, or changes in underlying assumptions. This means that CommunityViz can be of continuing use as Eureka citizens consider what they would like the future of their community to be.

Envisioning Task Force Original List of Indicators

I. Land Use Impacts

- A. Forested areas
- B. Prairie/grassland areas
- C. Riparian vegetation
- D. Greenways (contiguous natural areas)
- E. Farmland—threat to prime ag areas
- F. Farmland—threat to contiguous areas
- G. Farmland—proximity of residential to
- H. Aggregate resources

II. Environmental

- A. Wildlife populations
- B. Wildlife habitat
- C. Wildlife corridors (contiguous habitat)
- D. Surface water quality
- E. Ground water quality
- F. Chub Creek watershed water quality
- G. Vermillion watershed water quality
- H. Erosion impacts
- I. Impervious surfaces/surface water flows

III. Quality of Life

- A. Population density
- B. Nearest neighbor
- C. Traffic/congestion (commute time)
- D. Noise pollution
- E. Crime rate
- F. Traffic accidents
- G. Street safety

IV. Aesthetic Resources

- A. Open space—amount of and proximity to
- B. Utility lines/towers—amount of and proximity to
- C. Rural character
- D. Scenic viewsheds—roadway views
- E. Scenic viewsheds—homeowner views
- F. Scenic viewsheds—diversity of
- G. Light pollution
- H. Commercial signage
- I. Architecture—suburban-style vs. rural-style housing
- J. Architecture—farmsteads, barns, and historic buildings

V. Services

- A. Schools
- B. Fire
- C. Police
- D. EMS
- E. Solid waste disposal
- F. Government (level of)
- G. Commercial—demand/expectations

VI. Infrastructure

- A. Roadways—classification upgrades
- B. Roadways—new
- C. Natural gas lines
- D. Sewer lines/treatment plant
- E. Parks and trails (demand for)

VII. Economic

- A. Assessed property values
- B. Residential market land values
- C. Agricultural market land values
- D. Housing affordability
- E. Property tax rates
- F. Insurance rates (home, auto)

VIII. Recreational Index

- A. Snowmobile trails
- B. Bike access
- C. Hunting land
- D. Parks and Trails (access to)

IV. Indicators: Introduction—Continued

Selected Indicators—Data for the 15 selected **indicators** will be presented and discussed on the following four pages. Each page discusses a different set of indicators and compares these indicators across all six core growth **scenarios**. The indicators considered here fall into four distinct categories, each of which is discussed below.

1. Demographics and Infrastructure Indicators—Three indicators presented in this section attempt to measure general population impacts as a result of growth in the township: *number of new homes, number of new residents,* and *number of additional school children* (children under 18 years old). Taken together, these indicators are intended to provide a rough measure of how growth will change the demographics of the township. Another indicator—*miles of new township roads*—attempts to assess the impacts of growth on infrastructure. If the township decides to allow growth, it must ensure that the appropriate **infrastructure** is in place. Roads are a significant part of local infrastructure for which Eureka Township is responsible. Currently, the majority of township roads are gravel, which is appropriate for rural agricultural communities. However, for the more urban-style scenarios presented in this report (Suburban Progression and 2.5-Acre Rural Estates), gravel roads will no longer be practical and the Township will likely need to construct paved roads to meet traffic and safety demands. The *new township roads* indicator does not distinguish between gravel and paved roads; it only calculates new roads in terms of total length. Another important infrastructure need not specifically addressed in this report is wastewater and drinking water facilities. Only one scenario—the Suburban Progression Scenario—would require either the installation and maintenance of an urban sewer and water system, or connection to an existing one (although such a system or connection might be appropriate for other scenarios as well). When comparing scenarios, these factors should be considered.

2. Economic Indicators—Three indicators presented in this section attempt to measure economic impacts of growth on the township: *yearly road maintenance costs, safety and government costs,* and *revenue generated by local residential taxes.* It is important to note that these three indicators only address yearly maintenance and operation costs and do not include initial capital expenditures for services. To gain a better understanding of capital costs associated with growth, the township would be well-served by undertaking another study to specifically address these issues. The economic indicators used here were calculated using the methodology presented in the University of Minnesota Extension Service publication, *Estimating Fiscal Impacts of Residential Developments in Smaller Communities*, using figures for the year 2000 obtained from the Minnesota State Auditor's Office.

3. Water Quality, Solid Waste, Water Use, and Septic Discharge—Two indicators presented in this section attempt to measure the impacts of growth in the township on water quality: *total impervious surface area* and *areas of high or moderately high risk of groundwater pollution*. The *total impervious surface area* indicator measures the total surface area of new construction (rooftops, roadways, driveways, etc.) that will cause stormwater to run off instead of infiltrating into the soil. A significant amount of **impervious surface** area increases the risk of erosion and contamination of surface waters and necessitates adoption of a stormwater management plan to control water runoff and its impacts. The second indicator, *areas of high or moderately high risk of groundwater pollution,* measures the number of potential new homes that would be located in areas identified by Dakota County as being at higher risk of groundwater pollution. These areas include soils with high infiltration rates, high water tables, or other geological risk factors. Three other indicators measure *solid waste generation per day, total daily water use,* and *septic discharge* in gallons per day for each scenario.

4. Farmland and Natural Areas Indicators—Two indicators presented in this section attempt to measure the impact of growth in the township on agriculture and farmland: *acres of cultivated land impacted by development* and *acres of high-quality farmland impacted by development.* As new growth occurs in Eureka, more and more farmland will be converted to residential developments, while remaining farmland will become increasingly fragmented. These indicators look at such impacts to all cultivated land in the township and to farmland identified within the Dakota County **Farmland and Natural Areas Project** (FNAP) as highest priority for inclusion in the FNAP **purchase of development rights** program. (For more information about FNAP, see page 20 or contact Dakota County.) Two additional indicators in this section attempt to measure the impact of growth in the township on **natural areas**: *acres of high-quality natural areas impacted by development* and *acres of significant natural areas impacted by development.* These indicators look at development impacts on areas identified by the Dakota County Soils and Water Conservation District as high-quality natural areas and at areas identified by Envisioning Task Force members as important or significant natural areas.

IV. Indicators: Demographic and Infrastructure Impacts

Summary—Demographic and infrastructure impacts for each of the six core **scenarios** are illustrated on this page. Figure 1 illustrates the three demographic **indicators** (number of new homes, number of new residents, and number of additional school children under the age of 18). Figure 2 shows the one infrastructure indicator (amount of new township roads anticipated). New homes are simply a count of potential new homes that could be built under each scenario. New residents and school children are calculated based on the 2000 U.S. Census data for Eureka Township. In 2000, Eureka Township averaged 3.0 residents and 0.9 children under the age of 18 per household.

According to the 2000 U.S. Census, Eureka Township had a total population of 1,490 persons, 496 households, and 449 children under the age of 18. The Current Zoning Buildout Scenario would impact demographic indicators the least by adding 852 residents, 284 homes, and 257 children to the Township. The most dramatic impact to demographic indicators would result from the 2.5-Acre Rural Estate Scenario. This scenario would add more than 20,000 residents to the current population of Eureka, produce an additional 6,766 homes in the Township, and increase the number of children under the age of 18 by 6,125. Because they assume the same amount of growth, both the 10-Acre Buildout Scenario and the Residential Cluster Development Scenario would have the same impact on demographic indicators, adding 4,581 new residents, 1,527 new homes, and 1,382 new children under the age of 18.

Additional miles of roads in the Township required under each scenario would vary from a low of 6 miles (Current Zoning Buildout Scenario) to a high of 159 (2.5-Acre Rural Estate Scenario). The Residential Cluster Development Scenario illustrated on page 38 would add 77 miles of new roads. The majority of these roads would be used to locate new homes away from existing roads, **wetlands,** and **natural areas.** This is the primary reason why the Residential Cluster Development Scenario adds more road length than the 10-Acre Buildout Scenario, even though both scenarios assume the same number of new homes. Most of the homes in the 10-Acre Scenario would be accessible from existing roads.

Figure 1. Demographic Impacts

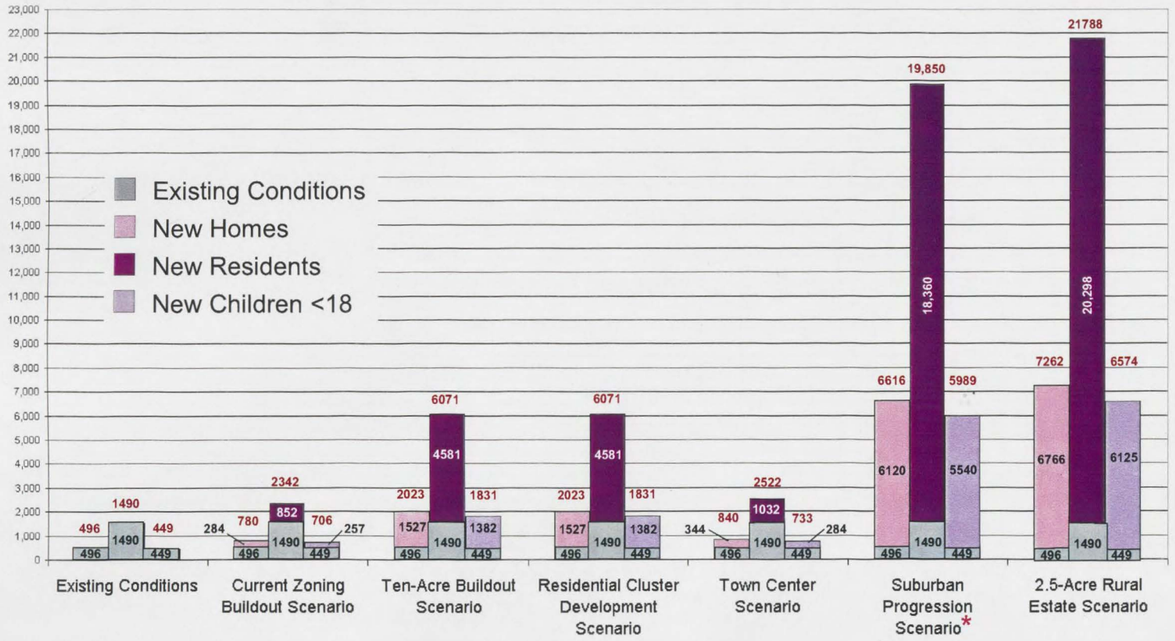
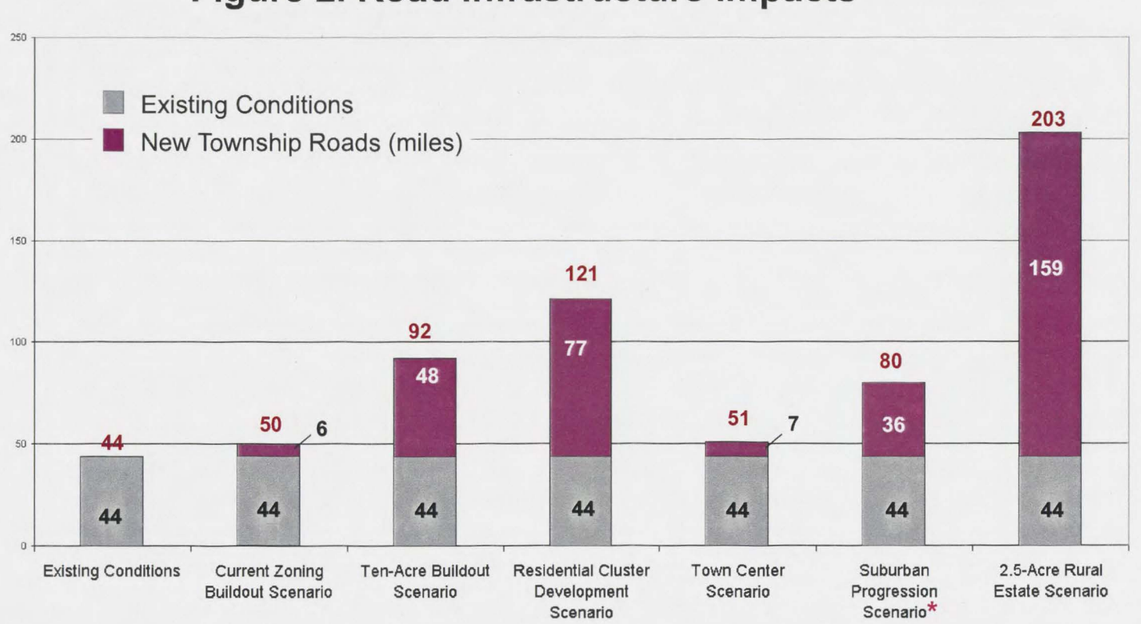


Figure 2. Road Infrastructure Impacts

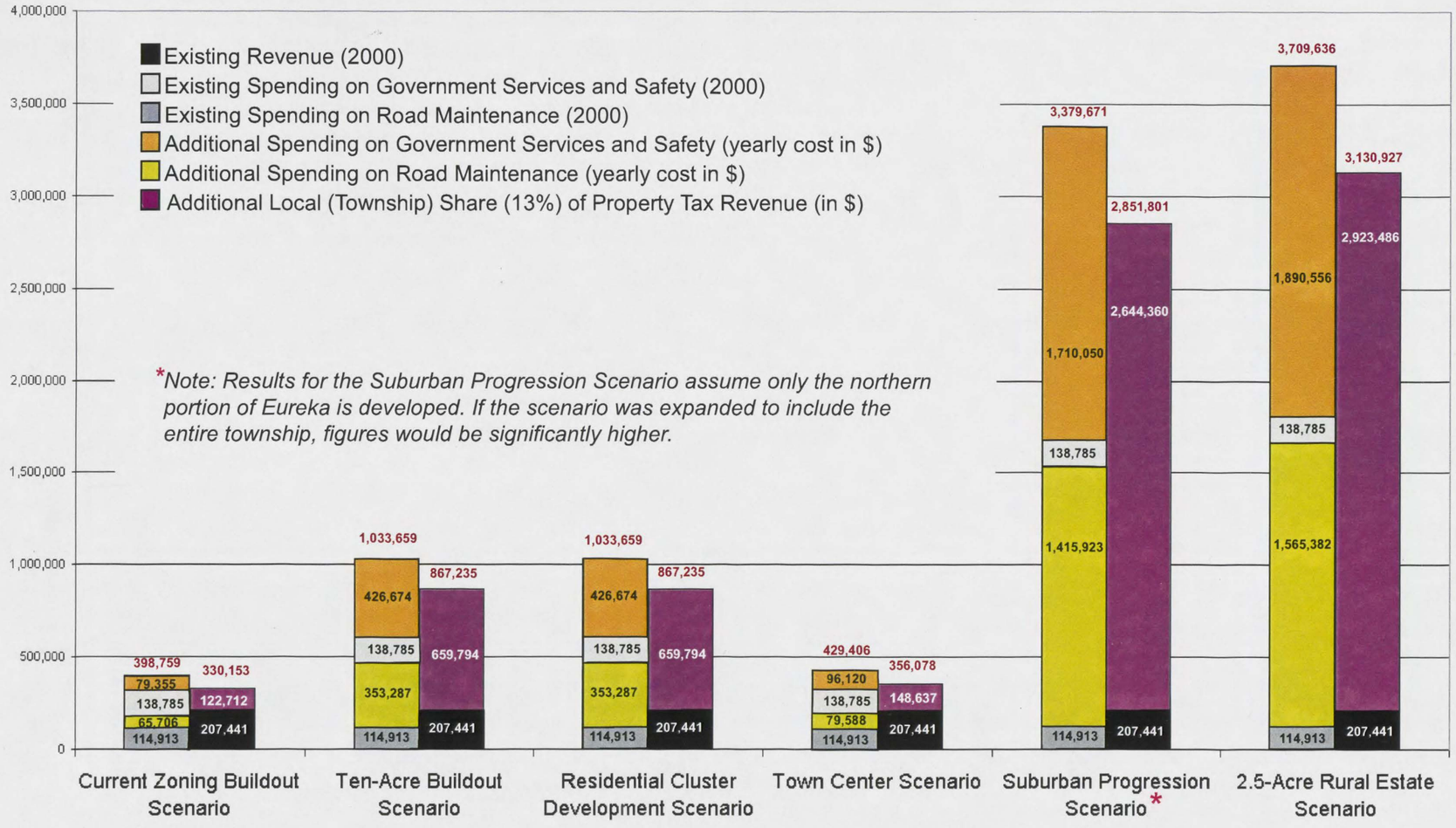


Note: Results for the Suburban Progression Scenario assume only the northern portion of Eureka is developed. If the scenario was expanded to include the entire township, figures would be significantly higher.

IV. Indicators: Economic Impacts

Summary—Potential economic or fiscal impacts for each scenario are illustrated on this page (see Figure 1). The **indicators** measure the future costs of road maintenance*, the costs of maintaining government services (including fire and police), and the potential tax revenue that would be generated from new residential development. The methodology used to determine these impacts was adopted from the from the University of Minnesota Extension Service publication *Estimating Fiscal Impacts of residential Developments in Smaller Communities.* Figures for the year 2000 obtained from the Minnesota State Auditor's Office were used to calculate potential impacts for these indicators.

Figure 1. Economic Impacts



*Note: Results for the Suburban Progression Scenario assume only the northern portion of Eureka is developed. If the scenario was expanded to include the entire township, figures would be significantly higher.

This fiscal impact analysis is not intended to be a comprehensive analysis of all economic impacts of development in Eureka. Because of the complex nature of school funding and formulas for state aid to local communities in Minnesota, as well as significant time and resource constraints on this study, it was difficult to do more than a cursory analysis. As Eureka citizens consider whether to undertake additional development in the Township, it will be necessary to conduct a more detailed fiscal impact analysis. However, the data presented here provide information on two critical fiscal impacts: the costs of maintaining Township roads** and providing basic government services (including police and fire protection). These data also consider the potential local share of tax revenue if the current (year 2000) property tax rate of 13% remains the same in future years (in other words, how much tax revenue could be expected if Eureka does not raise its tax rates).

In 2000, Eureka Township reported spending $138,785 to maintain Township roads and $114,913 for basic government services and safety. The Current Zoning Buildout Scenario would have the least economic impact on the Township; in today's dollars, the yearly cost to maintain Township roads would increase by $79,355 and basic governmental services would increase by $65,706. The greatest impact to the Township would occur under the 2.5-Acre Rural Estate Scenario, where road maintenance costs would increase by roughly $1.9 million and basic government services and safety costs would increase by approximately $1.5 million per year.

***This analysis does not distinguish between the costs of maintaining gravel roads versus paved roads. Road maintenance estimates are generalizations based on the current maintenance costs incurred by Eureka Township.*

IV. Indicators: Water Quality, Solid Waste, Water Use, and Septic Discharge Impacts

Summary—The **indicators** presented on this page illustrate potential impacts to water quality (surface and groundwater), the amount of solid waste generation, and the rate of water use and septic effluent discharge. The indicator *impervious surface area* measures the total amount of surface area through which stormwater cannot infiltrate into the soil. The greater the amount of **impervious surface,** the greater the need to manage stormwater to minimize flooding, erosion, and other impacts. At a minimum, this includes holding stormwater in retention ponds and channeling stormwater to surface water areas. Currently, Eureka has 381 acres of impervious surface, which represents less than 2% of the Township. The Current Zoning Buildout Scenario adds the least additional impervious surface area (438 acres), while the 2.5-Acre Rural Estate Scenario adds the most (1,734 acres). The second indicator presented below, *additional homes in high or moderately high groundwater risk areas,* measures the total number of new homes located over areas at higher risk for groundwater contamination. Currently, Eureka Township has 451 homes located in high-risk or moderately high risk areas. The Current Zoning Buildout Scenario would add the fewest additional homes to high- or moderately high risk areas (104 homes) and the 2.5-Acre Rural Estate Scenario would add the most (2,468 homes).

Solid waste generation for each scenario would range from a low of 1,278 additional pounds per day (Current Zoning Buildout) to a high of 30,456 pounds per day (2.5-Acre Rural Estate). The amount of water use and septic effluent discharge would also vary considerably for each **scenario.** The reader should be aware that for the Suburban Progression Scenario, septic effluent would be treated by a centralized **community wastewater treatment system** and water would be delivered via a centralized water system. All other scenarios assume private **onsite wastewater treatment systems**—either individual septic and well systems or collective systems shared by several households. Currently, Eureka Township residents use an estimated 49,300 gallons of water per day and discharge 32,045 gallons of septic effluent per day. Under the Current Zoning Buildout Scenario, an additional 28,400 gallons of water would be used and 18,460 gallons of septic effluent discharged per day. This represents the least amount of additional water useage and septic discharge for all six scenarios. Under the 2.5-Acre Rural Estate Scenario, an additional 676,000 gallons of water would be used and 439,790 gallons of septic effluent discharged per day. This represents the most additional water usage and septic effluent discharge for the six scenarios.

Figure 1. Impacts to Water Quality

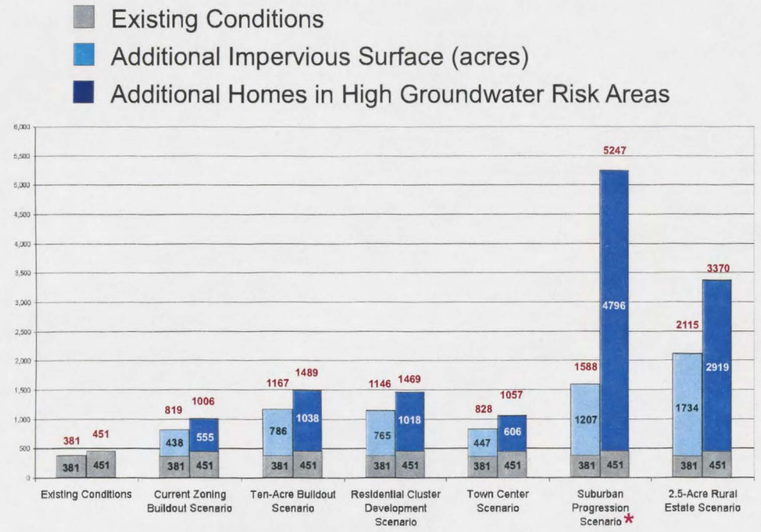


Figure 2. Impacts to Solid Waste

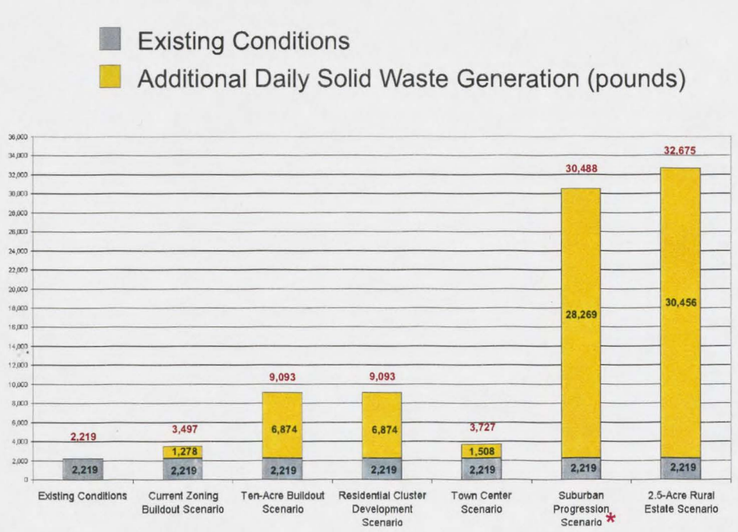
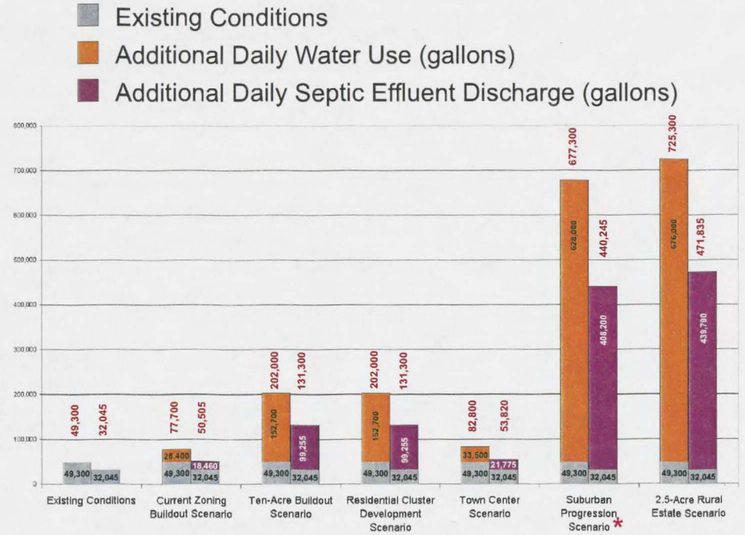


Figure 3. Impacts to Water Use & Septic Discharge



** Note: Results for the Suburban Progression Scenario assume only the northern portion of Eureka is developed. If the scenario was expanded to include the entire township, figures would be significantly higher.*

IV. Indicators: Farmland and Natural Areas Impacts

Summary—This page presents results for the farmland and **natural areas indicators**. Currently, Eureka Township contains 13,821 acres of actively farmed land. Eureka Township also contains 7,915 acres of farmland identified in the Dakota County **Farmland and Natural Areas Project** (FNAP) as high- or moderately high priority farmland. The Current Zoning Buildout Scenario would impact the least amount of farmland, resulting in a net loss of 1,076 acres of farmland and 206 acres of FNAP priority farmland (Figure 1). The Town Center Scenario would have the next lowest impact, resulting in the loss of 1,110 acres of farmland and 423 acres of FNAP priority farmland. The greatest impact to farmland would result from either the 10-Acre Buildout Scenario or the 2.5-Acre Rural Estate Scenario. Both of these **scenarios** could ultimately result in a total loss of farmland and FNAP priority farmland in Eureka Township. The Residential Cluster Development Scenario would impact 2,101 acres of farmland and 1,154 acres of FNAP priority lands. However, under this scenario, all farmland would be in very close proximity to residential development, which may limit or preclude traditional row crop or livestock agriculture. Under this scenario, alternative farming options—such as small-scale organic or truck farms, fruit orchards, or nursery stock farms—would most likely replace traditional row crop agriculture in Eureka. The Suburban Progression Scenario would impact 2,772 acres of farmland and 1,569 acres of FNAP priority lands. Because this scenario only allows dense development north of the Vermillion River, the remaining areas of the Township would remain agriculturally viable at the current quarter-quarter **zoning.** If **suburban-style development** is permitted throughout Eureka, a total loss of farmland would occur. Because the area adjacent to the Vermillion is one of the priority areas for protection under the FNAP program, the Suburban Progression Scenario would have a significant impact on FNAP priority farmlands because of its proximity to the Vermillion.

Eureka Township has 6,846 acres of existing natural areas. Of this total, 2,875 acres are considered high-quality natural areas by the Dakota County Soil and Water Conservation District (SWCD). To put these figures in context, the entire Township covers approximately 23,000 acres of land. Remaining natural areas therefore make up about 30% of the land area in Eureka and high-quality natural areas about 13%. Much of this land consists of **wetlands;** few forested areas or prairie landscapes remain in Eureka. The greatest impact to natural areas would occur under the 2.5-Acre Rural Estate Scenario, which would impact 5,944 acres (87%) of remaining natural areas (Figure 2). The least impact would occur from the Current Zoning Buildout Scenario, which would impact less than 300 acres of natural areas. It is important to note that impacts to natural areas are most likely greatly underestimated in this report. To calculate impacts to natural areas, the assumption was made that all development impacts would be limited to a total area of one acre immediately adjacent to the residence and that the remaining acres of the corresponding lot would be unaffected. Obviously the impact on natural areas will vary greatly from landowner to landowner; homeowners who are conservation-minded will likely preserve more natural areas, while homeowners who desire more lawn area or outbuildings will preserve less. Under the Residential Cluster Development Scenario, some land area would be held in common ownership by adjacent landowners, providing greater opportunity to protect natural areas.

Figure 1. Impacts to Farmland

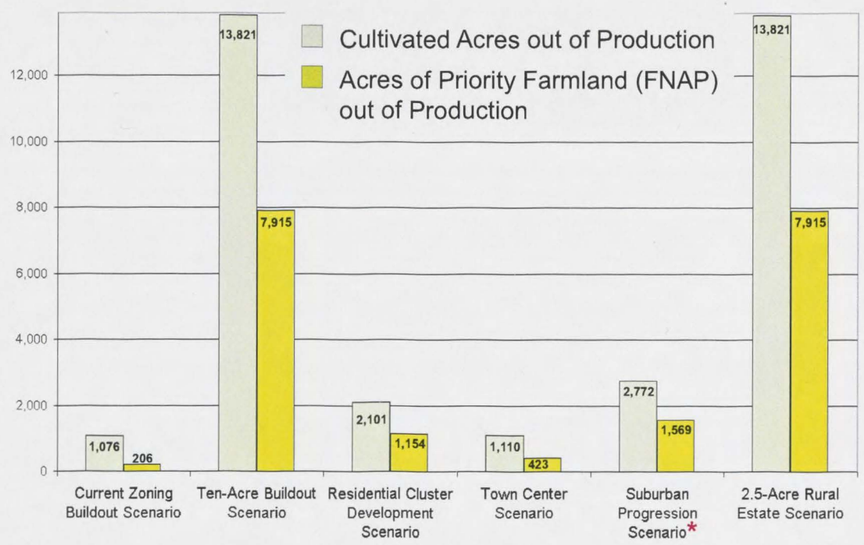
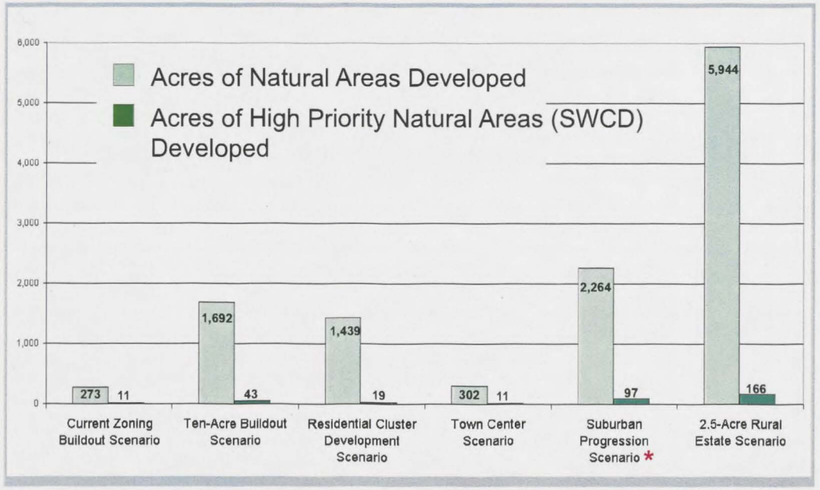


Figure 2. Impacts to Natural Areas



**Note: Results for the Suburban Progression Scenario assume only the northern portion of Eureka is developed. If the scenario was expanded to include the entire township, figures would be significantly higher.*

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V. Conclusion: Next Steps and Recommendations

The next step in the process of envisioning what Eureka Township might look like 10, 20, or 30 years from now ultimately lies with the citizens and elected officials of the community. Below is a list of suggested next steps and recommendations prepared by the Envisioning Task Force. Although this list of items is directed primarily at the town board, each item will require participation by Eureka citizens concerned about the future of their community.

1. **Recognize and encourage citizen involvement to build a sense of community and a create a genuine investment in the future of the township.** Task force members would like to see Eureka become a place where residents take genuine pride in their township, where people know and feel a connection to their neighbors, where citizens have many opportunities for civic participation, and where volunteers are recognized and appreciated for their efforts. Therefore, we would recommend:

   - continuing the use of **citizen task forces** to assist the town board and planning commission
   - holding an annual event such as a township clean-up day to encourage pride in Eureka
   - holding an annual "Citizen Appreciation Day" to recognize and thank citizen volunteers who contribute to the community

2. **Build the technical capacity of the township.** We believe it is important that the township make an investment in building the technical capacity of Eureka officials, staff, and citizens so they are able to address the complex issues surrounding development and growth. This might include:

   - initiating citizen focus groups, workshops, and informational meetings to provide Eureka residents with the necessary information to participate effectively in discussions about the future of Eureka
   - requiring appropriate training for all township officials and staff in how to address issues related to growth and rural development
   - identifying and obtaining the data and other information resources necessary to make development decisions in the best interest of the community

3. **Utilize current Envisioning Task Force members and other interested citizen volunteers as a resource to further research and inform the town board, planning commission, and Eureka residents about issues related to growth and development.** A number of issues that were raised during the course of the Envisioning Task Force's work require additional study and would be of value in future discussions of development in the township, including the following:

   - **transfer of development rights** programs
   - **greenway corridors** and **open space** areas
   - alternative or innovative commercial-agricultural opportunities
   - wastewater treatment and fresh water supply options
   - alternative design options for **mixed-use** and residential development
   - annexation issues
   - Airlake Airport expansion
   - refining existing, and creating additional, growth **scenarios** and **indicators** based on citizen input

4. **Stay abreast of developments beyond our borders and become engaged with Dakota County, the Metropolitan Council, and surrounding communities on issues of mutual interest or concern.** This might include:

   - Creating a committee of citizens and township officials from Eureka, Castle Rock, Greenvale, etc. to discuss problems or issues of mutual concern
   - Becoming more proactive in communicating to Dakota County the goals and vision of Eureka Township, and actively seeking input on and assistance from the county in implementing Eureka's long-range plans
   - Formalizing a relationship with the **Metropolitan Council** on long-term plans for Eureka and surrounding communities
   - Formally tracking development plans and zoning in neighboring towns such as Lakeville, Farmington, Castle Rock, Elko-New Market, etc.
   - Looking for opportunities to collaborate with the Dakota County Soil and Water Conservation District (SWCD)

V. Conclusion: Next Steps and Recommendations—Continued

5. **Create a vision statement for Eureka Township, based on input from residents, that describes what the township would ideally look like 30 years from now.** Without a shared vision for our community, there is a real risk that future growth in Eureka will be haphazard and inefficient and will be dictated by the needs of developers, not the interests of the township or its residents. Ultimately, the citizens of Eureka Township should decide—through public meetings, focus groups, and citizen surveys—what type of community they would like, because it is they who will have to live with and pay for those choices.

6. **Commission a fiscal impact study for future development in Eureka Township that considers the regional context for growth.** Recent studies have called into question the widely held assumption that development always has a positive economic benefit because it generates additional tax revenue. What is often left out of this equation is the hidden costs of development in terms of **infrastructure** and public services. We recommend the township commission a fiscal impact study that shows the costs of infrastructure and public services versus the revenue generated by residential, industrial, and commercial development. The **Metropolitan Council** or Minnesota Association of Townships may be able to provide assistance with such a study.

7. **Introduce guidelines and incentives to mitigate the impacts of development and encourage preservation and protection of natural resources, farmland, and scenic viewsheds.** These might include some or all of the following:

   - incentives for clustering homes to preserve open space and reduce impacts on farmland and natural areas
   - guidelines for the use of shielded outdoor lighting to reduce light pollution
   - incentives for siting new buildings in ways that preserve scenic viewsheds along roadways
   - guidelines for shielding or buffering around sheds and outbuildings

8. **Identify specific indicators to track over time to measure and document changes in our community.** One of the key features of **indicators** is the ability to track changes or identify trends over time. Therefore, it is useful to measure certain key indicators regularly and to compare trends to see whether existing policies are having the intended effect and are appropriate to achieve the long-term goals identified by the community. Such information can help inform future decision making.

9. **Utilize the services of professional planners or planning consultants with expertise in rural development.** Task force members believe Eureka needs a comprehensive, long-term plan in place for the entire Township before development pressures increase and before any changes to current **zoning** regulations are undertaken. In creating such a plan, Eureka would be best served by seeking the advice of qualified planners or consultants who have prior experience working successfully with rural-agricultural communities. It is important that township officials investigate the cost and feasibility of using professional planning services prior to the 2004 Annual Meeting so that citizens can be asked to authorize funds for this purpose at the meeting.

10. **Research and apply for grant opportunities available to the Township.** Millions of dollars in state, federal, and private grants are available to Eureka Township. The Envisioning Task Force's work with Dakota County and 1000 Friends of Minnesota is only one example of how our community can benefit from grants and other collaborative opportunities. In increasingly difficult fiscal times it is even more important for the Township to seek out other sources of revenue to support the preparation and planning that should precede any growth or development in Eureka. Task force members believe Eureka Township must be more aggressive in identifying and pursuing grant opportunities. We encourage the Board of Supervisors to approve grant-acquisition training for existing township staff, consider hiring additional staff with grant-writing skills, or seek out citizen volunteers with grant-writing experience who would be willing to research and apply for grant opportunities available to Eureka.

V. Conclusion: Final Remarks

In July of 2001, the Eureka Township Board of Supervisors appointed nine citizens to the Eureka Envisioning Task Force and empowered them to work with Dakota County and 1000 Friends of Minnesota. At that time, we were assigned three specific tasks:

- formulate and discuss a variety of growth **scenarios** for the Township
- learn about the potential impact of each growth scenario on such things as water quality, agriculture, wildlife, Township infrastructure, and resident quality of life
- inform the citizens of Eureka about their findings at the conclusion of their work

With the publication of this report and the conduct of a final public open house this fall, our three tasks will be completed. However, a much larger and more important task—creating a shared vision of what we want Eureka to become—has just begun.

During the past two years, members of the task force have worked diligently to educate themselves about rural growth and development, and to create hypothetical growth scenarios for the Township based on this knowledge. However, ***we have always viewed our work as only a first step in the process of envisioning the future of Eureka, a process that ideally should involve all members of our community.*** It is our hope that this report will contribute to that process—by sparking discussion among township citizens and officials, by helping them to better understand the complex issues surrounding growth and development, by showing the range of development options available to our community, and by enabling ***all*** Eureka citizens to participate effectively and confidently in decision making about our township.

No one can deny that growth pressures on Eureka are increasing. Still, Eureka remains in a rather unique position in the southern **Twin Cities metropolitan area**. Although we are located only 30 miles from Minneapolis–St. Paul, our community has managed to maintain a very strong **rural character**, support a wide array of agricultural enterprises, retain relatively low-density residential **zoning**, respect individual property rights, and preserve the many unique natural resources and scenic views that make our Township a special place to live. Meanwhile, we have watched neighboring communities on three sides experience explosive growth and have had an opportunity to learn from their experiences. We've seen the successes that result from foresight and careful planning. We've also seen the many intractable problems that arise when development occurs haphazardly and without consideration of long-term consequences: soaring taxes, traffic congestion, overtaxed services and **infrastructure**, loss of precious farmland and **natural areas**, contaminated groundwater, and runaway development. The lesson to be learned from these experiences is clear: ***it's far more costly and time-consuming for communities to fix the problems that arise from reckless and poorly planned growth than it is to plan carefully for the future and do it right the first time***.

But Eureka is quickly running out of time and we have only one opportunity to "do it right." Once we begin down the path of development, it will be nearly impossible to slow or stop the pace of growth in our Township. The members of this task force believe that the Eureka citizens of today owe it to future generations of Eureka residents to think through the development decisions we make and to carefully consider their long-term impacts on the Township. Unlike many neighboring communities, we still have an opportunity to chart our own course as a community rather than becoming chance travelers on paths we have not chosen for ourselves.

The Eureka Township Envisioning Task Force brought together a diverse group of nine Eureka residents with different backgrounds, experiences, and worldviews. Despite these differences, all task force members share a common concern about the future of Eureka Township, as well as a belief that ordinary citizens, armed with knowledge and a vision of what their community can be, have the power to shape their own future. It is the sincere hope of all members of the task force that this report will become a valuable reference tool for Eureka Township as its leaders and citizens chart the future of our community. If the Township uses the information in this report as a starting point for creating a community-wide, citizen-based vision for Eureka, ***we believe the Township can enjoy the benefits of growth and ensure that future development balances the rights, interests, and desires of all township residents.***

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VI. Appendix A: Recommended Reading and Resources

This bibliography has been prepared for Eureka citizens and township officials who wish to explore the extensive published resources on community envisioning and rural development. This is not intended as a complete bibliography, nor do we wish to suggest that the points of view of the authors listed represent the views of the Envisioning Task Force or are the only valid views on these topics. Our intention is only to help foster informed discussion.

Reference copies of many of the resources listed below are contained in the Envisioning Task Force Library. Most of these resources should also be available through the Interlibrary Loan service of any Dakota County Public Library. To borrow items from the Envisioning Task Force Library, contact Bob Papke at papkakecr@earthlink.net or 651-463-8546.

Books and Reports

Blueprint 2030. **By the Metropolitan Council of the Twin Cities. St. Paul: Metropolitan Council, 2002.** Presents a regional blueprint for the Twin Cities metropolitan area for the next 30 years. Includes significant recommendations concerning development in rural portions of the metro area.

Community By Design: New Urbanism for Suburbs and Small Communities. **By Kenneth B. Hall and Gerald A. Porterfield. New York: McGraw-Hill, 2001.** Discusses basic design concepts and the application of new urbanism to community development.

Conservation Design for Subdivisions. **By Randall G. Arendt. Washington, D.C.: Island Press, 1996.** A practical guide to creating and preserving open space through conservation design.

Cost of Public Services Study. **By Duncan and Associates et al. St. Paul: Minnesota Department of Agriculture, 1999.** Analyzes the fiscal impact of new residential development on a select group of rural Minnesota counties. Can assist local officials to make informed decisions about the preservation of agricultural land and evaluate the impact of development scenarios on local government budgets.

Dakota County 2020: Yesterday, Today, and Tomorrow. **By the Dakota County Office of Planning. Hastings, MN: Dakota County, October 1999.** The latest comprehensive plan for Dakota County.

Dakota County Farmland and Natural Area Protection Plan. **By the Dakota County Office of Planning. Hastings, MN: Dakota County, 2002.** Summary of the Farmland and Natural Area Project, which addresses citizen concerns over the loss of farmland and natural areas in the county.

Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land. **By Ralph Heimlich and William Anderson. Washington, D.C.: U.S. Department of Agriculture, 2001.** Discusses the consequences of continued large-lot suburban development on rural and agricultural communities.

Estimating Fiscal Impacts of Residential Developments in Smaller Communities. **By Barry Ryan and Steven J. Taff. St. Paul: University of Minnesota Extension Service, 1996.** A workbook that provides a framework for evaluating the fiscal impacts of residential developments. Organized around the major revenue and expenditure categories of municipal budgets.

Eureka 1854–1954. **By Benita Devney. Eureka, MN: N.P., 1954.** A history of Eureka written by a Farmington historian as a part of the Township's centennial celebration in 1954.

Guide to Community Visioning: Hands-On Information for Local Communities. **By Steven C. Ames. Chicago: American Planning Association, 2001.** A product of the Oregon Visions Project, this book is designed to help citizens understand the connection between the kind of place they want their community to be and the policies that will support their vision. Shows how to design and implement an effective visioning process in your community.

Holding Our Ground: Protecting America's Farms and Farmland. **By Tom Daniels and Deborah Bowers. Washington, D.C.: Island Press, 1997.** A concise description of agricultural land preservation tools including transfer of development rights (TDR), purchase of development rights (PDR), conservation easements, urban growth boundaries, and local right-to-farm laws.

VI. Appendix A: Recommended Reading and Resources—Continued

Linking Economic Development and Planning: Small Town and Rural Planning Series. **By the American Institute of Certified Planners. Videotape (75 minutes), 1994.** Discusses techniques for revitalizing small town economies without ignoring other concerns or risking damage to community character.

Managing Change in Rural Communities. **Washington, D.C.: National Endowment for the Arts and U.S. Department of Agriculture, Natural Resources Conservation Service, 1995.** Identifies ways to manage economic, environmental, growth, and other changes in rural areas.

Measuring Change in Rural Communities: A Workbook for Determining Demographic, Economic, and Fiscal Trends. **By Ray Rasker, Jerry Johnson, and Vicky York. Tucson, AZ: Sonoran Institute, 2000.** A hands-on guide for community residents interested in understanding how changes in their community might shape the future.

Preserving Rural Character **(PAS 429). By Fred Heyer. Chicago: American Planning Association, 1990.** Discusses the hazards of conventional, large-lot residential zoning and strip commercial districts as methods to protect rural characteristics, and explains how a community can adapt conventional planning methods to successfully preserve rural character while accommodating development.

Profiles in Rural Economic Development: A Guidebook of Selected Successful Rural Area Initiatives. **Margaret G. Thomas. Kansas City, MO: Midwest Research Institute/U.S. Department of Commerce, 1988.** Intended for small community leaders and economic development specialists, this guide offers ideas on alternative rural development strategies through case studies of 65 successful rural economic develepment initiatives.

Renewing the Countryside: Minnesota. **By Jan Joannides, Sara Bergan, Mark Ritchie, Beth Waterhouse, and Okechukwu Ukaga. Minneapolis: Northeast Minnesota Sustainable Development Partnership, 2001.** Tells the stories of 43 Minnesotans who are promoting their rural communities through innovative businesses, living practices, or community projects.

Rural by Design: Maintaining Small Town Character. **By Randall Arendt, with Elizabeth A. Brabec, Harry L. Dodson, Christine Reid, and Robert D. Yaro. Chicago: Planners Press, 1994.** Practical land-use planning techniques on topics ranging from sewage disposal and farmland preservation to greenway planning and designing rural subdivisions. Includes numerous case studies.

Rural Communities in the Path of Development: Stories of Growth, Conflict and Cooperation. **By Julie Marx and Priscilla Salant. Washington, DC: The Aspen Institute Rural Economic Policy Program, 1996.** Discusses the causes and consequences of rapid growth in small towns and rural places, as well as how to recognize and confront problems associated with growth and development.

Rural Environmental Planning for Sustainable Communities. **By Paul Lusk et al. 1991.** Describes a system of rural planning, using citizen input, that preserves resources for present and future generations while accommodating growth and development. The system uses the concepts of land classification and carrying capacity (the amount of use that land can sustain without a deterioration in its quality) to direct growth to appropriate areas of a community.

Rural Sustainable Development in America. **By Ivonne Audirac. New York: John Wiley & Sons, 1997.** A survey of successful approaches to sustainable rural development throughout the country. Includes discussions of farming at the urban edge, greenways and trails, rural-urban economic partnerships, rural waste management, and community and regional revitalization strategies.

Saving America's Countryside: A Guide to Rural Conservation. **By Samuel N. Stokes, A. Elizabeth Watson, and Shelley S. Mastran. Baltimore and London: Johns Hopkins UP, 1997.** Combines case studies of successful rural conservation efforts with general information about and techniques for effective rural land-use planning.

The Small Town Planning Handbook, **second edition. By Thomas L. Daniels, John W. Keller, and Mark B. Lapping. Chicago: Planners Press, 1995.** Easy-to-use guide for citizens and government officials shows how to approach planning in small towns with few residents and limited resources.

VI. Appendix A: Recommended Reading and Resources—Continued

***Under Construction: Tools and Techniques for Local Planning.* By Minnesota Planning. St. Paul: MN Planning, 2002.** A guide for people interested in shaping their communityís future. The guide is based on the principles of sustainable development, and offers local governments and those they serve ideas for developing a comprehensive plan that articulates the aspirations and vision of a community.

***Vermillion River Watershed Handbook.* By Diane Riggs. St. Paul, MN: Minnesota Department of Natural Resources, 2002.** A guide to help landowners make their property "Vermillion River Friendly."

***When City and Country Collide: Managing Growth in the Metropolitan Fringe.* By Tom Daniels. Washington D.C.: Island Press, 1998.** Presents alternatives to traditional land-use and development practices that can promote urban sprawl.

Web Sites

Eureka Township Web Site
http://eurekatownship-mn.us
Contains a wealth of information about Eureka Township past and present.

CommunityViz Software
http://www.communityviz.com/
Information about the software program at the heart of the Eureka Envisioning study.

***Eureka 1854–1954.* By Benita Devney.**
http://www.geocities.com/fahsmn/eureka_township.htm
History of Eureka written as a part of the Townshipís centennial celebration in 1954.

Dakota County Farmland and Natural Areas Project
http://www.co.dakota.mn.us/planning/farmland/farmland_project.htm
A citizen-centered project to protect important or sensitive farmland and natural areas in the county through the use of voluntary tools.

Minnesota Department of Planning 2000 U.S. Census Page
http://www.mnplan.state.mn.us/demography/Census2000.html
Links to 2000 U.S. Census data for Minnesota.

The Smart Growth Network
http://www.smartgrowth.org
A collaboration of the U.S. Environmental Protection Agency and several nonprofit and government organizations. Encourages development that serves the economy, the community, and the environment.

Town of Dunn Web Site
http://www.town.dunn.wi.us/
The town of Dunn, Wisconsin, located just outside Madison, has had great success using conservation easements and other land protection strategies to preserve farmland and open space while allowing for moderate growth.

1000 Friends of Minnesota
http://www.1000fom.org/
An organization dedicated to balancing growth and conservation in Minnesota by working with individuals and local communities to counteract tendencies toward careless, unplanned sprawl.

Metropolitan Council
http://www.metrocouncil.org/index.htm
The regional planning agency serving the Twin Cities seven-county metropolitan area and providing transportation, wastewater treatment, planning assistance, and other services to the region.

Minnesota Sustainable Communities Network
http://www.nextstep.state.mn.us/index.cfm
A project of the Minnesota Office of Environmental Assistance that encourages networking and information exchange among those working for sustainability in agriculture, waste management, energy, manufacturing, urban planning, economic development, housing, forestry, land use, and transportation.

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VI. Appendix B: Glossary of Terms

This appendix lists and defines terms used in this report that are technical in nature or that may be unfamiliar to some readers. All terms defined in the glossary are printed in **boldface** throughout the report for easy identification.

Agricultural Preserve Area—A **Metropolitan Council** designation for large, contiguous land areas planned and zoned to maintain agriculture as the primary long-term land use. Communities containing substantial Agricultural Preservation Areas are generally located on the region's best soils. A community's choice of this land use designation signals its intent to support agriculture as the most important element of the local economy and to ensure that the agricultural economy remains strong. To support these local aspirations, the Met Council forecasts nominal growth for this planning area, indicating its expectation that only farm-related housing development will occur in these areas. *See also page 18.*

Agricultural Preserves Program—A voluntary agricultural preservation program administered by the **Metropolitan Council** for the purpose of protecting agricultural land in the Twin Cities metropolitan area. Enrolled land is assessed according to its agricultural value rather than its market value. There is an additional property tax credit ("conservation credit") of at least $1.50 per acre per year. Other benefits include exemption from special assessments and protection from annexation. Enrollees are required to complete the Metropolitan Agricultural Preserves Restrictive Covenant enrollment form specifying that the land will be kept in agricultural use as defined by state statutes. The restrictive covenant remains in effect indefinitely, or until the date an expiration notice is signed. The restrictive covenant and its benefits terminate 8 years from the date the expiration notice is filed.

alternative scenarios—A variation of one of the core growth scenarios presented in this report. The variation usually results from the introduction of a new development approach or planning tool, or a change in one of the assumptions underlying the core scenario. *See also pages 28–29.*

base density—The maximum number of dwellings or buildable residential parcels that are allowable on a given site, not including any **density bonus** or transfer of **development credits** that may apply.

Blueprint 2030—A development plan for the **Twin Cities metropolitan area** developed by the **Metropolitan Council**. The plan outlines a strategy for helping communities absorb the nearly 1 million people estimated to settle in the metro area during the next 30 years. Goals of the plan include increasing lifecycle and affordable housing, preserving and protecting natural resources and agricultural lands, providing greater transportation choices, reinvesting in older and developed communities, and focusing growth and redevelopment in urban and rural centers and along existing transportation corridors. *See also page 18.*

buildout—A hypothetical development scenario in which all buildable land in a particular area is developed to full capacity.

citizen task forces—The Eureka Township Board of Supervisors has created several citizen task forces to provide research assistance and facilitate citizen input on important issues affecting Eureka. Citizen task forces function in an informal advisory capacity only and are not empowered to enact policy. The first task force, established in 1999, was charged with considering the issue of aggregate (gravel) mining in Eureka. Since then, the board has created a Town Hall Task Force to investigate alternatives for replacing the current town hall, a Commercial Task Force to research the feasibility and desirability of allowing additional commercial development in Eureka, a Nonconforming Land Use Task Force to reconsider Ordinance 32 regulating Nonconforming Commercial Uses in the Township, and an Envisioning Task Force to investigate future growth **scenarios** for Eureka.

cluster development—A design or **zoning** technique that involves grouping houses on smaller lots in one area of a development while preserving the remaining land on the site for recreation, common **open space**, agricultural uses, or protection of environmentally sensitive areas. *See also pages 38–39.*

collar counties—The nine counties that surround the **Twin Cities metropolitan area**. These counties include Chisago, Goodhue, Isanti, LeSueur, McLeod, Rice, Sherburne, Sibley and Wright. *See also page 18.*

community character—The physical, natural, and cultural assets that represent the unique qualities of life in a particular community.

VI. Appendix B: Glossary of Terms—Continued

community visioning—A collaborative process that brings together all sectors of a community to identify problems, evaluate changing conditions, and build collective approaches to improve the quality of life in the community.

CommunityViz™—**CommunityViz**™ is an extension of ArcView **geographic information system** software that allows users to model hypothetical land use **scenarios** and to quantify and compare the potential impacts of each scenario. The software was developed by the Orton Foundation and has formed the technological basis for the work by the Eureka Envisioning Task Force presented in this report. *See also page 7.*

community wastewater treatment systems—A centralized system used to collect and treat wastewater. These systems generally involve gravity sewers and pumping stations that feed wastewater to a central treatment plant.

comprehensive plan—A master plan to guide the long-term physical development, including land use and infrastructure, of a particular area. Ideally, the comprehensive plan should express the long-term growth and development goals of the community and should involve significant input from citizens and other stakeholders.

conservation easement—A legally recorded agreement by which landowners voluntarily give up certain rights to the use of their land (such as the right to develop the land for residential, industrial, or commercial purposes) to protect important land resources for future generations. A conservation easement is usually held by a qualified conservation organization or local unit of government. Conservation easements are frequently used with **purchase of development rights** (PDR) or **transfer of development rights** (TDR) programs. *See also page 30.*

density—The number of housing units allowed per acre by local **zoning ordinance**. Currently, Eureka has a housing density of one house per quarter-quarter section. Density can be further defined in net and gross terms. *Gross density* is determined using the total acreage of a project area. *Net density* is determined using only developable acres in a project (gross acres minus right-of-ways, **wetlands,** steep slopes, and **open space**).

density bonus—A special **zoning** provision that allows developers to develop a property at a higher density than normally allowed in exchange for meeting a specified community development goal. Density bonuses are usually expressed as a percentage. For example, a community that wants to encourage affordable housing might offer a density bonus of 25% to housing developers who agree to construct a certain percentage of units that are affordable to low-income households. A developer in the community plans to build 20 houses on a 20-acre parcel that is zoned for one house per acre. They agree to meet the affordable housing goal, however, so they earn the density bonus, meaning they can build 25% more houses (an additional 5 houses) on the 20-acre parcel than the standard zoning allows. Density bonuses are often used to encourage **cluster development** or preservation of **open space**.

development credits—Under a **transfer of development rights** (TDR) program, development credits are the method by which development is directed toward areas of the community that are better able to accommodate development. Under a TDR program, a community identifies **sending areas** within its boundaries that it would like to see protected from development, as well as **receiving areas** where it desires more dense, urban-style development. Landowners in the sending zone are allocated a certain number of development credits based on the amount of land they own. These development credits can then be sold to developers, speculators, or the community itself in exchange for the landowner agreeing to place a permanent conservation easement on his or her land. Meanwhile, the purchaser of the development credits can apply them to develop on property within the receiving zone at a higher density than would otherwise be allowed by local **zoning ordinances**. *See also page 30.*

Farmland and Natural Areas Project (FNAP)—A program to protect high-quality farmland and sensitive natural areas in Dakota County through the **purchase of development rights**. The program is funded by a publicly approved $20 million bond and will allow interested property owners in the County to voluntarily sell development rights to their land, thus providing permanent protection from future development on the land. Countywide, 36,000 acres of priority natural areas and 42,000 acres of priority farmland have been identified as potentially eligible for protection under the program. *See also page 20.*

VI. Appendix B: Glossary of Terms—Continued

geographic information system (GIS)—a computer-based system for creating, analyzing, and displaying maps of various geographic features using digital data. The power of a GIS comes from the ability to combine different geographic information to show interrelationships. For instance, a GIS map of Eureka with three types of data—existing farmland or **natural areas**, wetlands and waterways, and current development—would allow identification of **greenway corridors** that provide high-quality habitat for wildlife. Such information might lead to better planning for future development that does not disrupt wildlife habitat.

greater metropolitan region—The Twin Cities greater metropolitan region encompasses the seven counties in the **Twin Cities metropolitan area**, as well as the nine **collar counties** that surround the metro area. *See also page 18.*

Green Acres—The Green Acres Property Tax Deferment program is designed to protect farmland in Minnesota by authorizing deferment of assessments and taxes payable on farmlands whose valuations are increased due to residential or commercial development potential.

greenway corridors—Continuous areas of vegetation that provide pathways for the movement of wildlife or people. Greenways often follow natural waterways or land features and may connect natural areas or other community resources such as parks, cultural institutions, or civic buildings. Examples of greenways in Eureka include the natural areas along the Vermillion River, Chub Lake, and Chub Creek.

hybrid scenarios—A combination of two or more of the core growth **scenarios** considered in this report. The purpose of a hybrid scenario is to combine the best elements of each of the core scenarios it incorporates. *See also pages 28–29.*

impervious surfaces—Areas that cannot be penetrated by water, such as parking lots, rooftops, roadways, and driveways. The amount of impervious surface has a direct impact on the amount of water runoff and erosion, the demand for storm sewer capacity, and the quality of water.

indicator—A feature of a community (for example, population, number of roads, demand for services, or amount of farmland) that could be impacted by future development in a way that is statistically predictable and measurable. *See also page 46.*

infrastructure—Physical structures that form the foundation for development, including public sewage and water systems, waste management facilities, electric power, communications and transportation corridors and facilities, and oil and gas pipelines.

Metropolitan Council—A commission created by the 1967 Minnesota Metropolitan Planning Act to provide a regional perspective on issues affecting the **Twin Cities metropolitan area**. The council has jurisdiction over wastewater collection and treatment, regional parks, airports, and transportation in the seven-county metro area, and is also responsible for working with local units of government on comprehensive land-use planning and plans for handling solid waste.

Metropolitan Urban Service Area (MUSA)—That portion of the seven-county **Twin Cities metropolitan area** that is approved by the **Metropolitan Council** for sanitary sewer and municipal water service. Currently the area is designated by a line (referred to as the MUSA line) that indicates where municipal services are permitted. The MUSA line encompasses parts of Lakeville and Farmington, but currently does not extend into Eureka Township.

mixed-use development—Development projects that integrate different land uses such as retail stores, restaurants, civic buildings, residential units, offices, and **open space** within a defined area.

natural areas—Places that are mostly undisturbed by human activities and that contain native vegetation in naturally occurring patterns across the landscape. Types of natural areas in Dakota County include **wetlands,** prairie, oak savannas, floodplain forests, and upland forests.

New Urbanism—An urban design philosophy that challenges conventional suburban development and embraces a set of development practices intended to create more attractive and efficient communities. New Urbanism promotes walkable communities, land-use diversity, regional planning for open space, appropriate architecture, and the balanced development of jobs and housing as the best way to reduce congestion, increase the supply of affordable housing, create a sense of community cohesion, and rein in urban sprawl. *See also* **Traditional Neighborhood Development**.

VI. Appendix B: Glossary of Terms—Continued

onsite wastewater treatment systems—Generally refers to individual sewage treatment systems where wastewater exits the home or business and passes through a septic tank before it is treated in a soil absorption field located on the site. These absorption fields can be pipe-in-rock trenches, chambers, or beds. Some onsite systems incorporate the use of aeration systems or sand filters that remove organic material and some pathogens from the wastewater before it is pumped to the absorption field. Properly designed shared onsite wastewater systems can treat sewage from several households or businesses.

open space—Undeveloped places that provide areas for recreation, wildlife habitat, and scenic views. They may be public or privately owned. Examples in Eureka Township include farmland, remaining forested areas, utility corridors, and the Chub Lake State Wildlife Management Area.

ordinance—A law or regulation set forth and adopted by a governmental authority, usually a city or county.

overlay zone—A set of **zoning** requirements that is used to impose more restrictive development standards for a certain area than those specified under the basic zoning for the area. Overlay zones are usually employed to deal with special physical or cultural characteristics present in the underlying zone, such as flood plains, fragile environments, or historically significant areas. In Minnesota, a common overlay zone is the shoreland zone. The shoreland zone is overlayed onto already zoned areas, such as a residential zone around a lake or **wetland** area, to protect water resources from inappropriate development. As with standard zoning regulations, variances can dilute the power and usefulness of overlay zones.

purchase of development rights (PDR)—Purchase of development rights programs involve voluntary legal arrangements with landowners who agree to sell to a nonprofit conservation organization or public agency the rights to develop their property. A **conservation easement** is then placed on the land and recorded on the title to permanently limit the future use of the land to agriculture, forestry, or other **open space** uses. *See also page 31.*

quality of life—Quality of life is a complex, abstract, and multidimensional concept that is difficult to define and measure. In the context of this envisioning project, quality of life means how happy residents of Eureka are compared to residents of another community. To measure quality of life, residents are usually asked to rate their level of happiness or satisfaction with various aspects of the community. This may include such things as housing, natural resources, cultural opportunities, community relations, economic vitality, education, crime and safety, and transportation.

receiving areas (zones)—Under a **transfer of development rights (TDR)** program, the areas a community identifies as better able to accommodate development. Development is directed toward **receiving areas** in exchange for limiting development in designated **sending areas** in the community. *See also page 30.*

riparian vegetation—A vegetative buffer around lakes, rivers, and **wetlands** that helps to reduce erosion, filter water runoff from farmland and other surrounding areas, and provide wildlife habitat.

rural character—Having rural qualities and agricultural uses. Rural character includes such attributes as rolling topography, dense vegetation, natural flora and fauna, country roads, open space, fence rows, barns and silos, large tracts of agricultural fields and pastures, protected natural resources, scenic views, river and stream corridors, and woodlands. Areas with significant rural character usually have low-density non-suburban development to support agriculture as a viable way of life.

rural residential—Although there is no standard definition of the term, the **Metropolitan Council** defines *rural residential* as development at a net **density** of one home per 10 acres of land. A more practical definition of rural residential is development at any density that is served by rural infrastructure and for which there is no plan to provide urban infrastructure such as paved roadways or access to centralized water, natural gas, or wastewater treatment service. Such development might range in density from one house per 2.5 acres to one house per 40 acres. *See also pages 21–22.*

scenario—A hypothetical description or model of a possible future development pattern. *See also pages 28–29.*

VI. Appendix B: Glossary of Terms—Continued

sending areas (zones)—Under a **transfer of development rights (TDR)** program, the high-priority areas a community identifies as wanting to protect and preserve. Development is directed away from sending areas in exchange for denser development in designated **receiving areas** in the community (or, under some TDR arrangements, in another community). *See also page 30.*

smart growth—Efficient, integrated, planned development that consciously seeks to avoid wastefulness and damage to communities and the surrounding environment. *See also* **sustainable development**.

suburban-style development—Suburban-style development is typically characterized by low-density residential development that is clearly segregated from other land uses such as commercial, industrial, or office parks. There are generally fewer homes per acre and all types of development tend to be more dispersed compared to the more compact development patterns characteristic of urban areas. Retail and other commercial enterprises are typically located in strip mall developments. Suburban residents are dependent on the automobile for travel, since adequate transit service is usually lacking and residential development is distant from places of work or shopping. Other common features of suburban-style residential development include wide streets to accommodate greater automobile traffic, attached garages fronting on the street, cul-de-sacs and other nonlinear and noncontinuous street patterns, and few public gathering places.

sustainable development—Development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs. *See also* **smart growth**.

town center—A compact area with a mix of retail, office, commercial, and residential development that serves as a central location for community activity and provides a gateway to the community. *See also page 40.*

traditional neighborhood design—A design philosophy that focuses on the creation of **mixed-use** pedestrian-oriented neighborhoods in contrast to the low-density commercial and residential development common in the United States since World War II. The design technique incorporates such features as narrower residential streets, alleyways for delivery and service access, entry doors and porches facing the street, detached garages located to the rear of homes, and architectural styles appropriate to the local landscape and culture. *See also* **New Urbanism**.

transfer of development rights (TDR)—Transfer of development rights programs create preservation or **sending areas**, and **receiving areas** where communities encourage additional growth and development. In exchange for not developing their land, landowners in the sending area receive **development credits**, which they can sell. Real estate developers, speculators, or the local government can then purchase the development credits and use them to increase existing or planned **densities** in receiving areas. TDRs generally involve a **conservation easement** that is placed on the land and recorded on the title to permanently ensure the future use of the land is limited to agriculture, forestry, or other **open space** uses.

Twin Cities metropolitan area—Generally refers to the seven counties that encompass Minneapolis and St. Paul and the suburban areas immediately adjacent to them. These include Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties. *See also page 18.*

watershed—A broad geographic area defined by natural hydrology that collects and discharges water into surface water bodies or that recharges groundwater, or both. A watershed generally includes rivers, streams, lakes, **wetlands,** and the surrounding landscape. Eureka is part of both the Vermillion River watershed and the North Cannon River Watershed.

VI. Appendix B: Glossary of Terms—Continued

wetland—a general term used to describe areas that are neither fully terrestrial nor fully aquatic. These areas range in character from marshes and swamps to shallow depressions that hold water at most only a few weeks out of the year. Wetlands provide critical habitat for migratory waterfowl, reduce flooding and siltation on major waterways, filter and remove contaminants that might otherwise find their way into drinking water, and provide recreational opportunities such as fishing, hunting, and boating.

zoning—Zoning **ordinances** determine the types of land uses and development **densities** that are permissible in a particular area. They are a key element in guiding a community's growth and protecting natural resources. Consistent with its designation as an **Agricultural Preserve Area**, Eureka Township has been zoned for agricultural and residential uses only since 1982, and has maintained a one house per quarter-quarter section zoning density.

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VI. Appendix C: Eureka Township Map Atlas

Map 1: Eureka Township Ownership Parcels

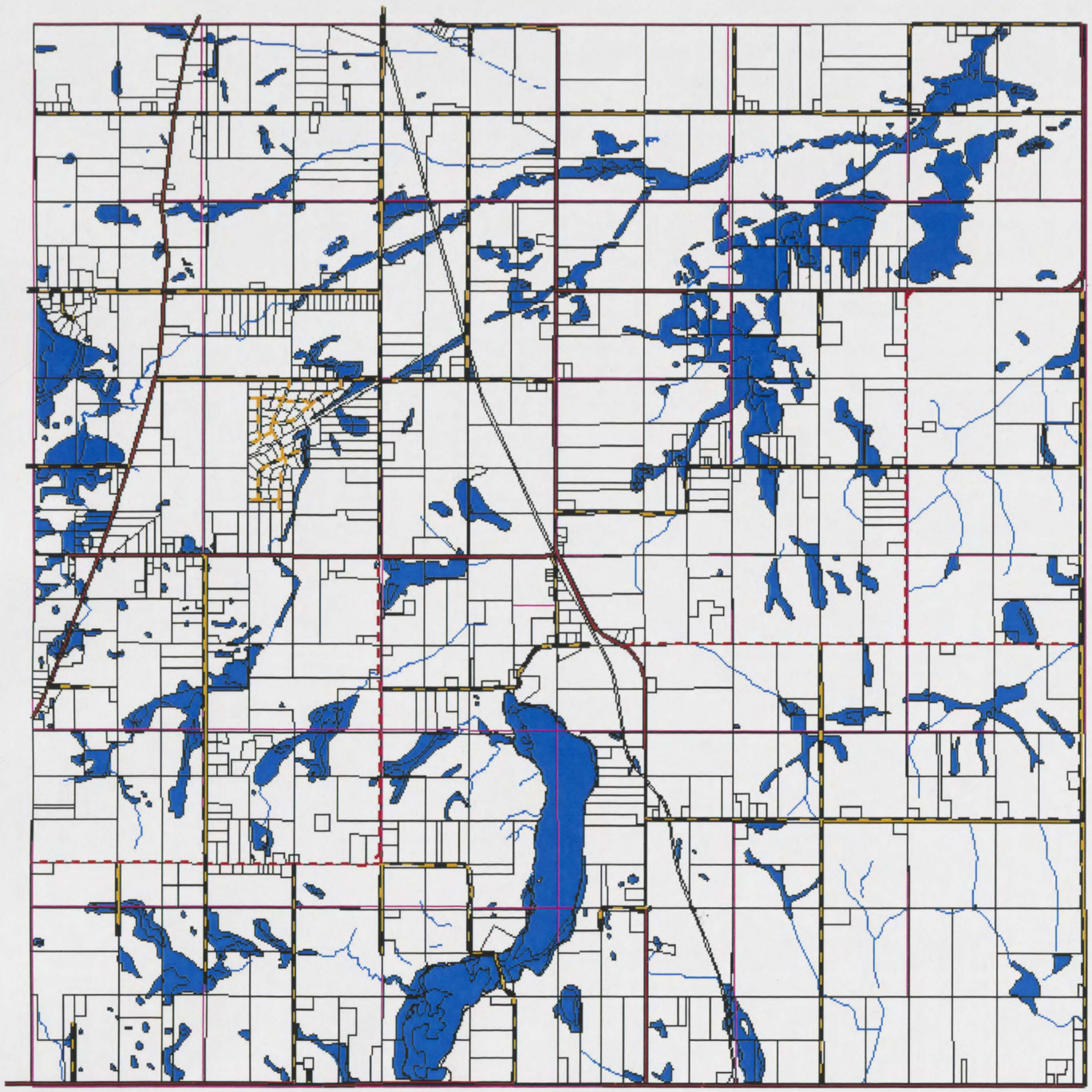
Map 2: Eureka Township Land Cover

Map 3: Eureka Township Farmland Areas Identified by the Dakota County Farmland and Natural Areas Project (FNAP)

Map 4: Eureka Township Natural Areas Identified by the Dakota County Farmland and Natural Areas Project (FNAP)

Map 5: Eureka Township Priority Natural Areas Identified by the Dakota County Soil and Water Conservation District (SWCD)

Map 6: Eureka Township Groundwater Sensitivity to Pollution



Eureka Township Ownership Parcels (2000)

Township Paved Roads

Township Gravel Roads

County Gravel Roads

County Paved Roads

Surface Water and Wetlands

2000 0 2000 4000 Feet

N

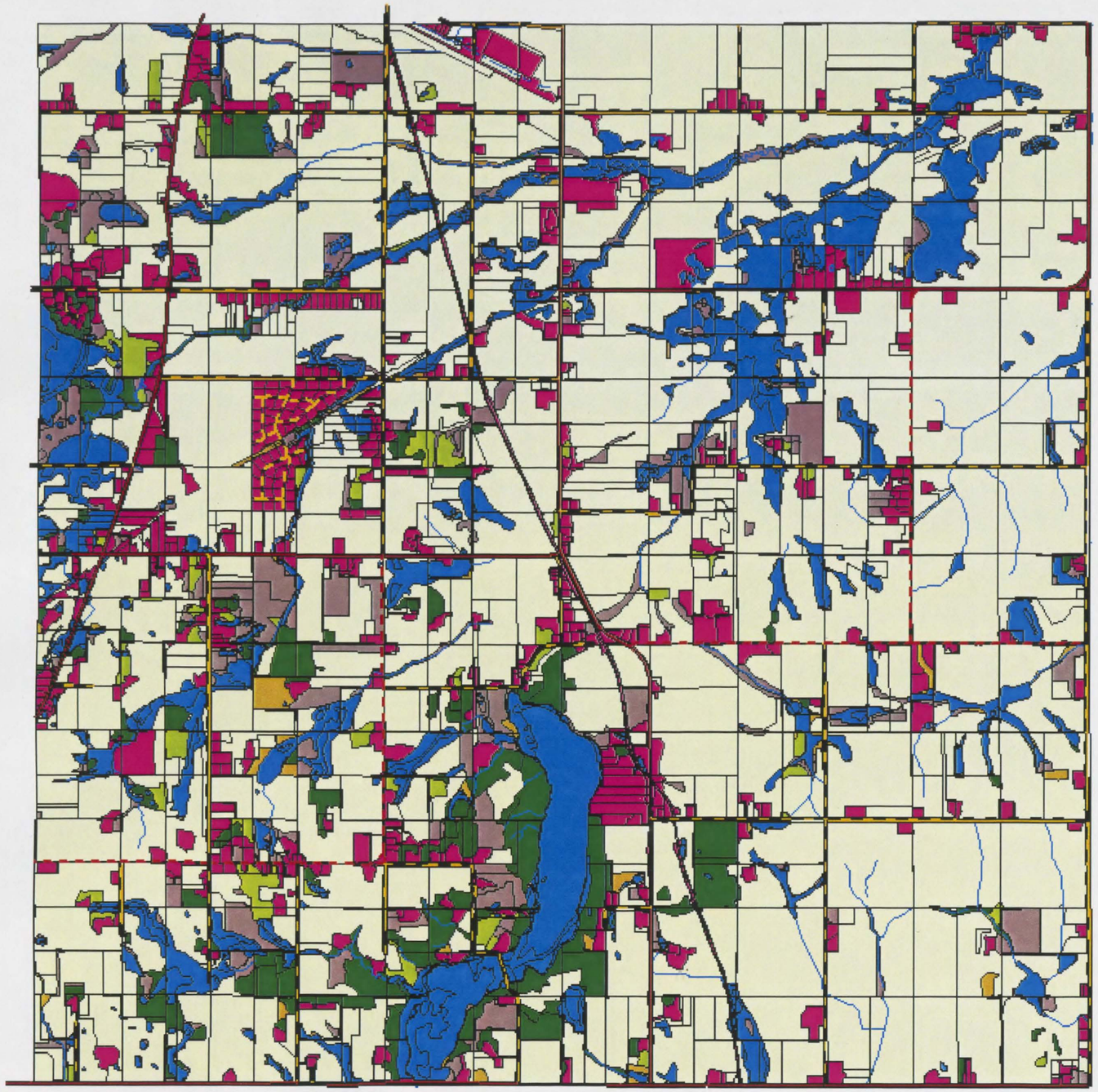
Source: Dakota County

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

1000 FRIENDS MINNESOTA

Map 1
August 8, 2003



Eureka Township Land Cover

- Township Paved Roads
- Township Gravel Roads
- County Gravel Roads
- County Paved Roads

- Artificial Surfaces and Associated Areas
- Planted or Cultivated
- Forest
- Woodland
- Shrubland
- Herbaceous
- Surface Water and Wetlands

3000 0 3000 6000 Feet

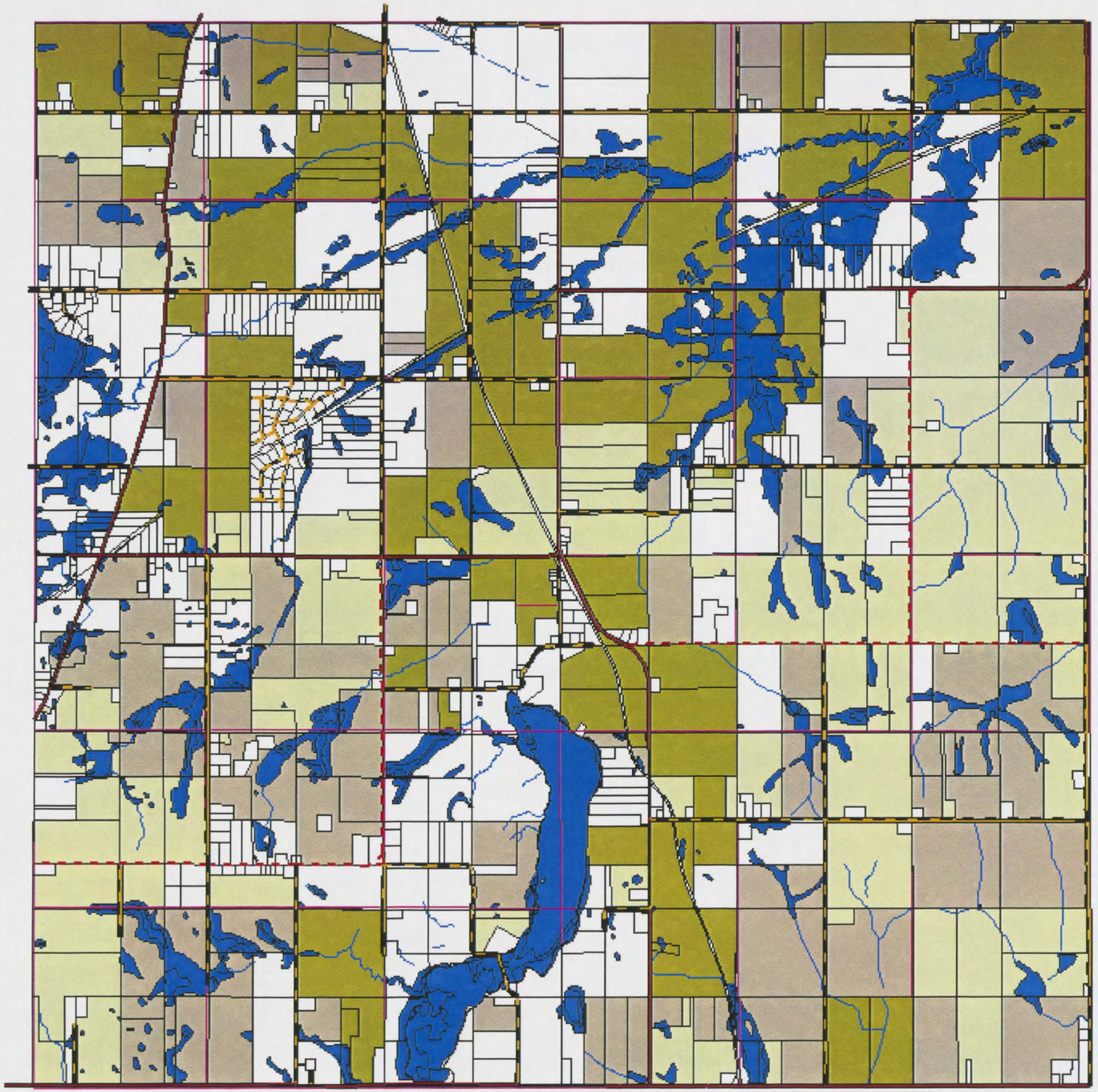
N

Source: Dakota County Soil and Water Conservation District (SWCD)

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

Map 2
August 8, 2003



Eureka Township Farmland Areas Identified by the Dakota County Farmland and Natural Areas Project (FNAP)

Township Paved Roads

Township Gravel Roads

County Gravel Roads

County Paved Roads

High Priority FNAP Farmland Areas

Medium Priority FNAP Farmland Areas

Medium/High Priority FNAP Farmland Areas

Surface Water and Wetlands

2000 0 2000 4000 Feet

N

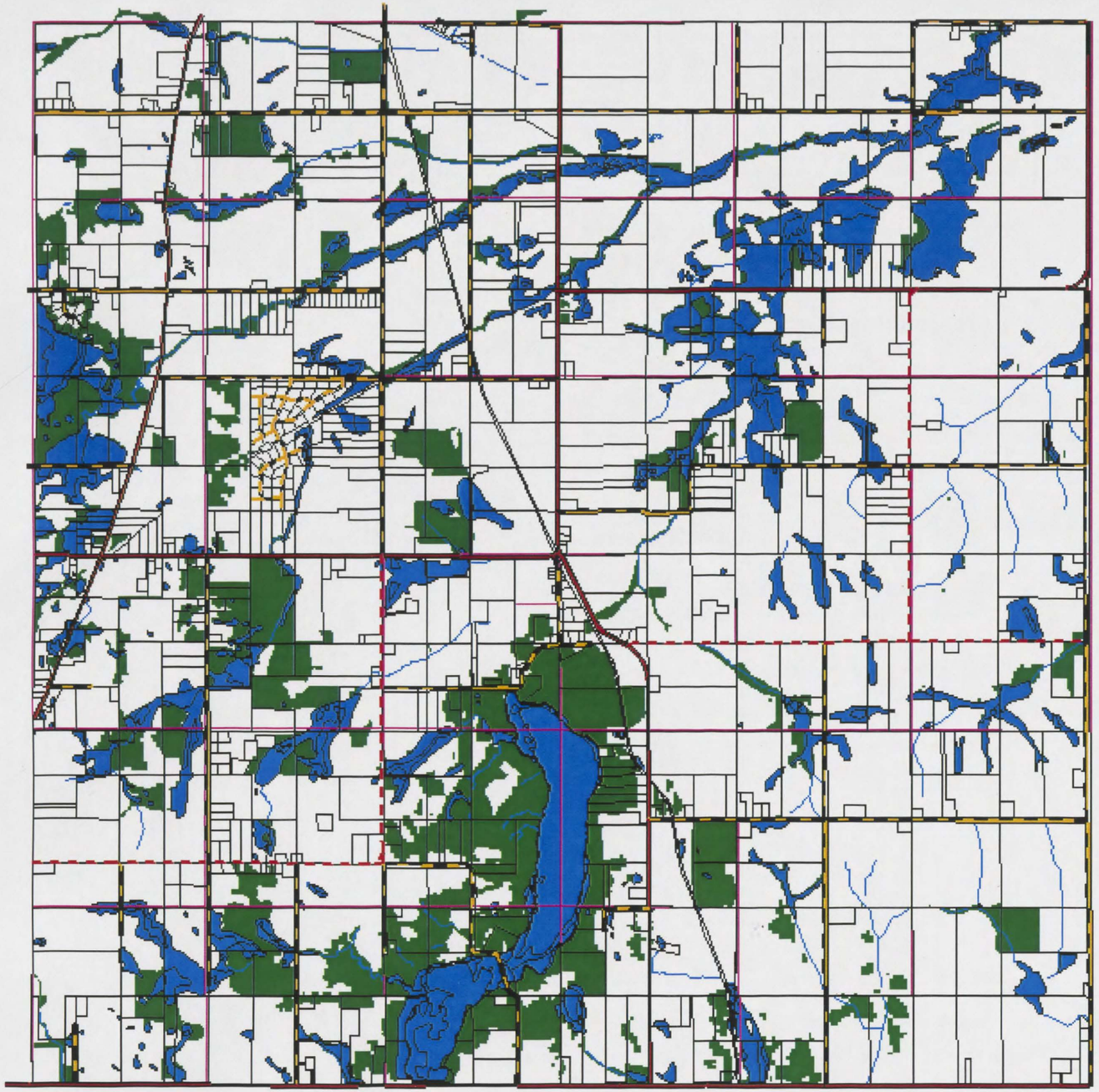
Source: Dakota County

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

1000 FRIENDS MINNESOTA

Map 3
August 8, 2003



Eureka Township Natural Areas Identified by the Dakota County Farmland and Natural Areas Project (FNAP)

- Township Paved Roads
- Township Gravel Roads
- County Gravel Roads
- County Paved Roads
- Priority Natural Areas (FNAP)
- Surface Water and Wetlands

3000 0 3000 6000 Feet

N

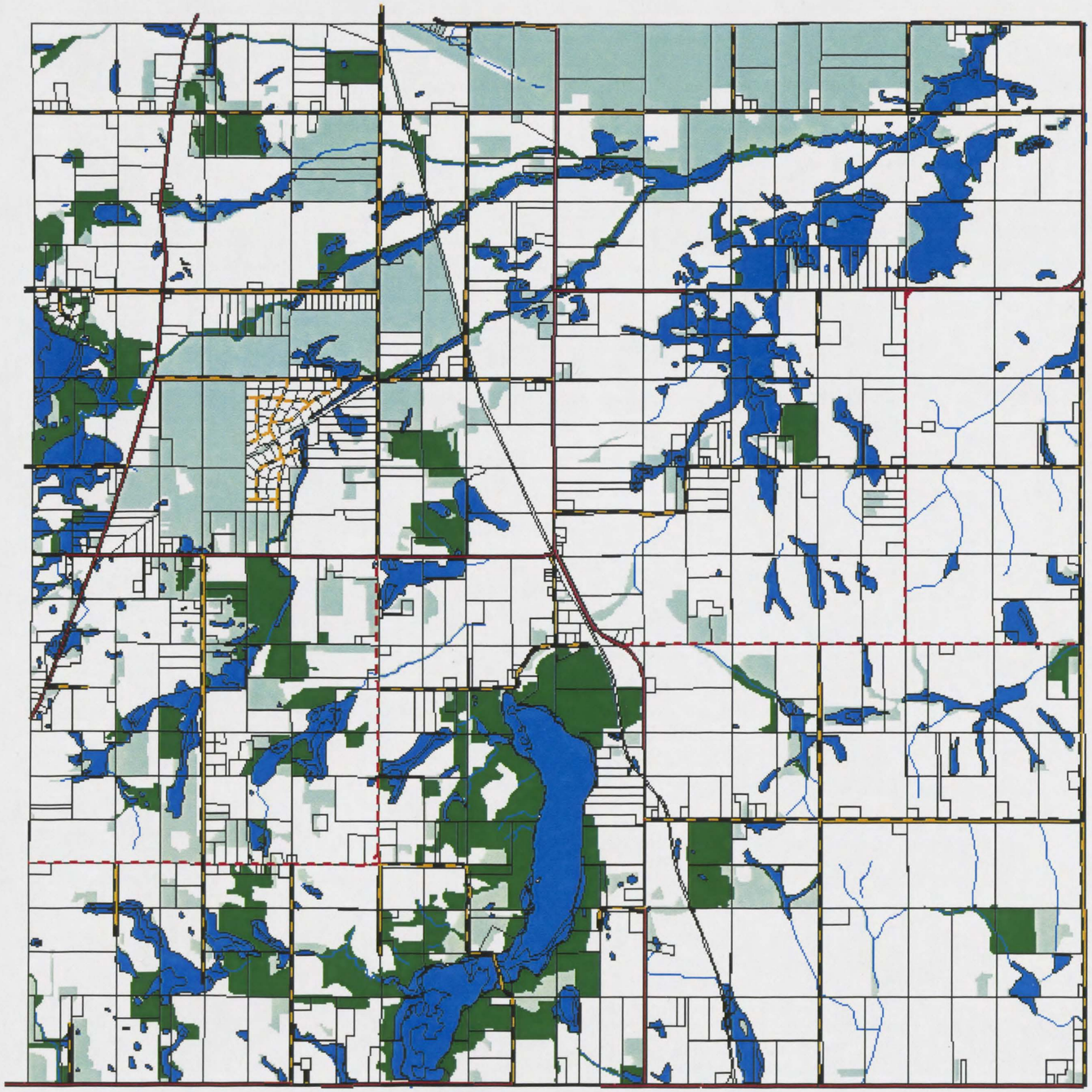
Source: Dakota County

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

1000 FRIENDS OF MINNESOTA

Map 4
August 8, 2003



Eureka Township Priority Natural Areas Identified by the Dakota County Soil and Water Conservation District (SWCD)

- Township Paved Roads
- Township Gravel Roads
- County Gravel Roads
- County Paved Roads
- High and Medium Priority Natural Areas (SWCD)
- Low Priority Natural Areas (SWCD)
- Surface Water and Wetlands

3000 0 3000 6000 Feet

N

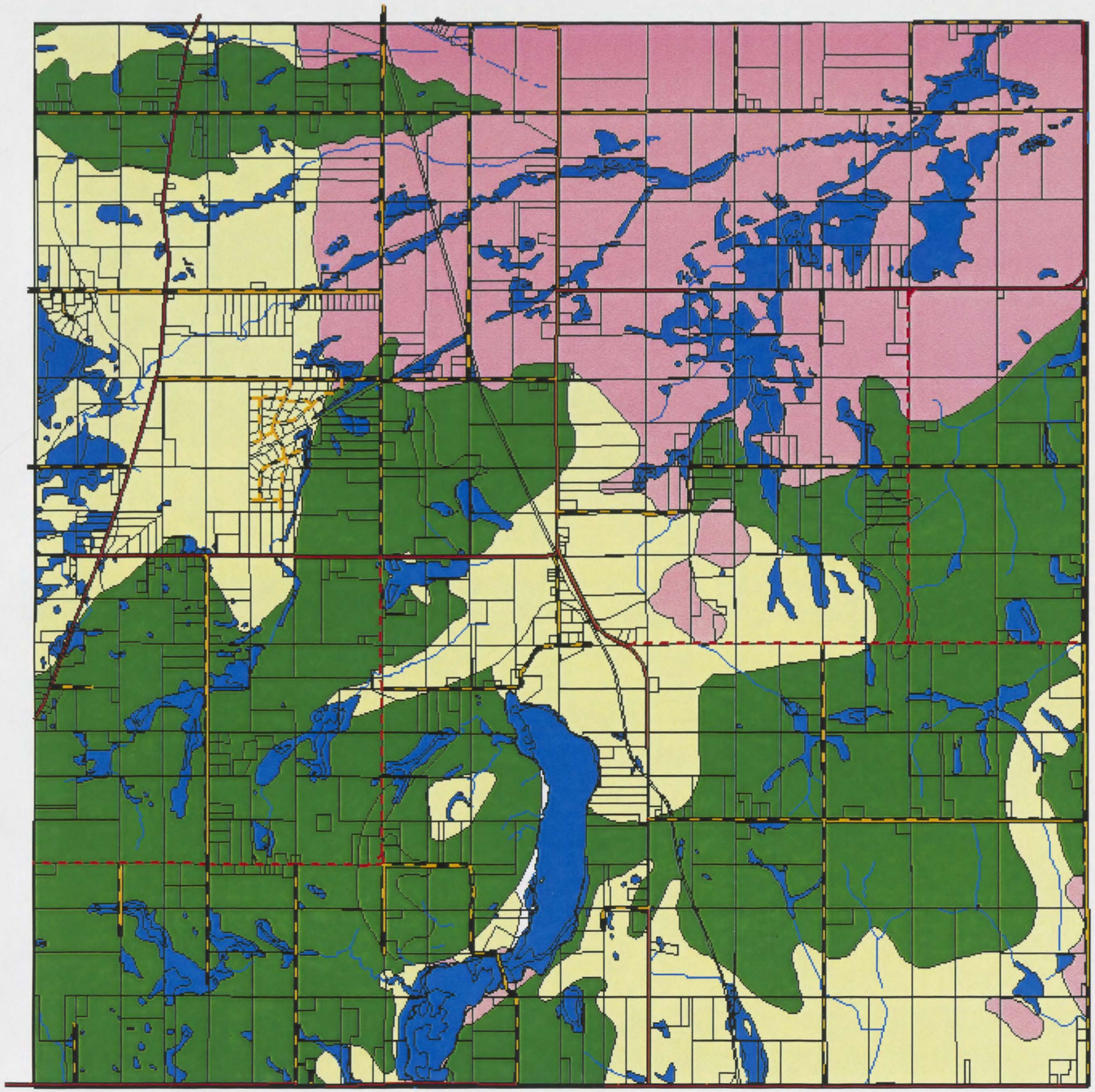
Source: Dakota County SWCD

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

Map 5
August 8, 2003

Eureka Township Groundwater Sensitivity



Township Paved Roads

Township Gravel Roads

County Gravel Roads

County Paved Roads

High Groundwater Sensitivity to Pollution

Moderate Groundwater Sensitivity to Pollution

Low Groundwater Sensitivity to Pollution

Surface Water and Wetlands

3000 0 3000 6000 Feet

N

Source: Dakota County

Eureka Envisioning

Eureka Envisioning / 1000 Friends of Minnesota

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Map 6
August 8, 2003